Textile Industries

Formerly "COTTON"

A W. R. C. Smith Publication

MAY, 1953

Highlights

70% High School Grads . . 105

How to Weave Filament . . 107
(First of a series)

Double Trumpet Spinning . 114

They are Watching You! . 118

French Worsted Combs . . 121

Auto Body Knit Cleaning . . 126

Quick-Stopping Warper . . 130

We Rewind Filling 132

Improve Tear Strength . . 134

Scroop Can Be Measured . 136

ACMI Convention Report . 143

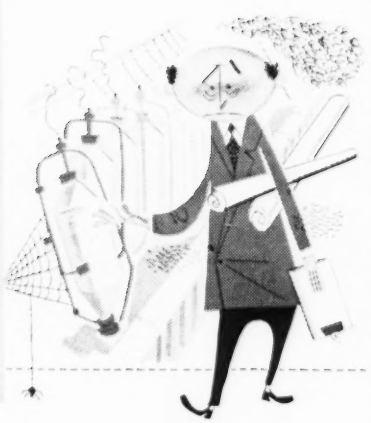
Engravings for Printing . . 149

Our Debt to Technology . 165

Complete Contents on Page 3

Reading begins on Page 4

If you're planning to swap old ways for new



In other industries, when old traditions have been forgotten, modern processing and streamlining have cut costs, speeded production and stepped up quality.

It works in textiles, too. Several of our recent projects, now in operation, have proved that streamlined designs and operations are the answer to rising costs. Other advanced designs now on our drawing boards will soon be helping other farsighted mill men solve present production problems and, better still, forestall future trouble.

Modern textile engineering, practically applied to a new mill or a modernization program, may be your answer to growing costs and reduced profits.

here's a good starting point

ROBERT AND COMPANY ASSOCIATES
Textile Engineering Division
ATLANTA

Serving the Great Names in Textiles for Over 38 Years

Alabama Mills, Inc.
American Bemberg Corp.
Cabin Crafts, Inc.
Chicopee Manufacturing Corporation
Cluett, Peabody & Co., Inc.
Crompton Company
Crystal Springs Bleachery
Davenport Hosiery Mills
Dixie Mercerizing Co.
B. F. Goodrich Company
The Goodyear Tire and Rubber Company
Marshall Field & Co., Inc.
Mt. Vernon-Woodberry Mills, Inc.
Muscogee Manufacturing Co.
Peerless Woolen Mills
Pepperell Manufacturing Co.
Standard-Coosa-Thatcher Co.
Swift Manufacturing Co.
Swift Spinning Mills
The Springs Cotton Mills
Thomaston Mills
United Merchants & Manufacturers Co., Inc.
West Point Manufacturing Company

Ready cash can mean the difference...

If you work on a narrow margin of profit, the amount of money you may save by having ready cash can often mean the difference between profit and loss. A ready cash position can be yours — easily. Send coupon below for full information.

Commercial Factors Corporation

TWO PARK AVENUE, NEW YORK, N.Y.

SOUTHERN REPRESENTATIVE
William Gilliam, Charlotte, N.C.
CHarlotte 5-5452

NEW ENGLAND REPRESENTATIVE
Thomas R. Heaslip, Waltham, Mass.
WAltham 5-6637M

MAIL NOW

Mr. J. Achelis, President
Commercial Factors Corporation
Two Park Avenue, New York 16, N.Y.

Please send us information describing your service.

Name _____ Title _____

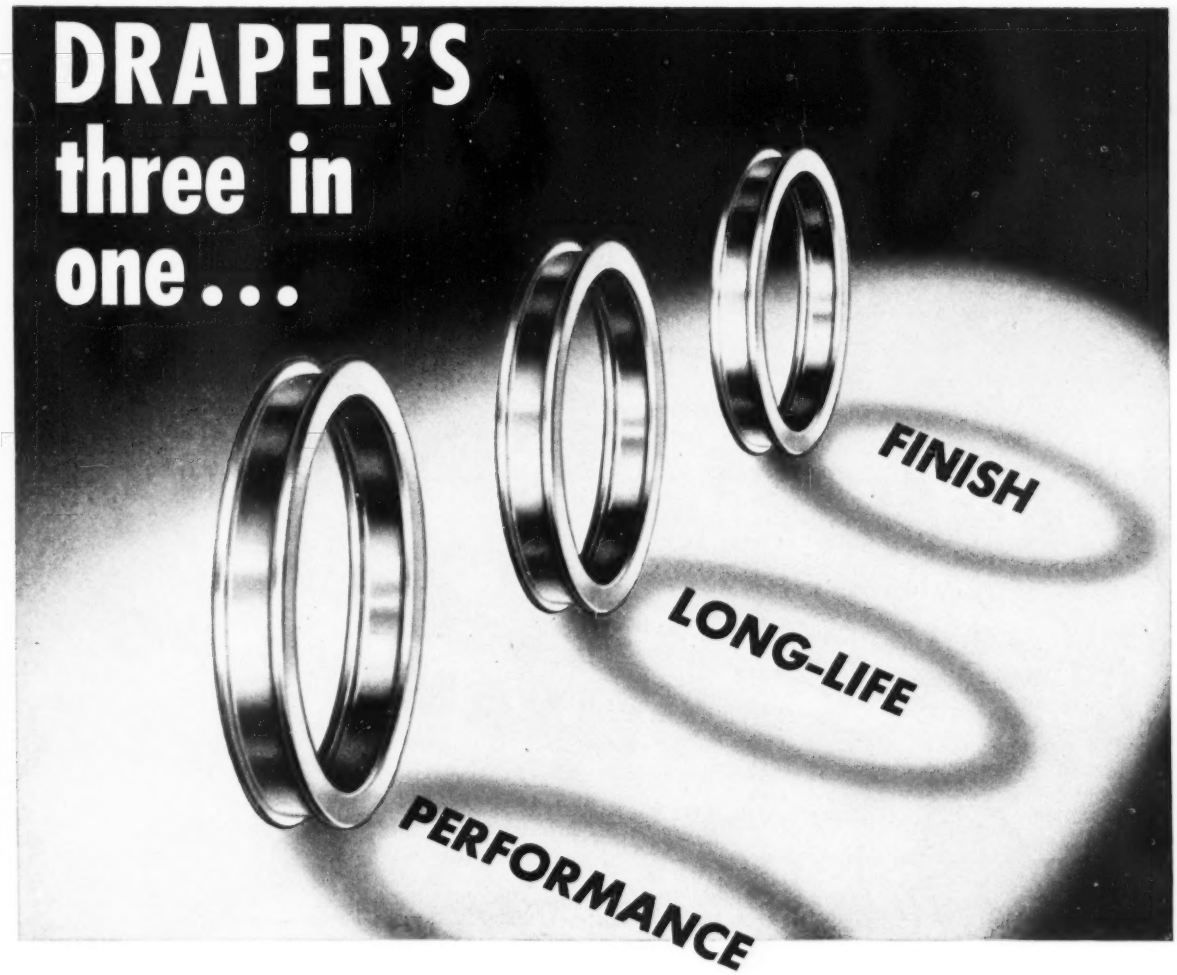
Company _____

Address _____

City and State _____

TEXTILE INDUSTRIES is published monthly at 116 E. Crawford St., Dalton, Ga., by W. R. C. Smith Publishing Company, Dalton and Atlanta, Ga., U. S. A. Executive and Editorial Offices 806 Peachtree St., Atlanta 5, Ga.
Subscription Rates: United States and Possessions, $2.00 for one year; Canada, South America, Central America, $2.00 per year; Foreign Countries, $5.00 per year. Entered as second-class matter at the post office, Dalton, Georgia, under the Act of March 3, 1879.

DRAPER'S three in one...



▸ Finish

Draper's "Mirror"* finish is famous throughout the textile industry. Minimum variation in under-flange.

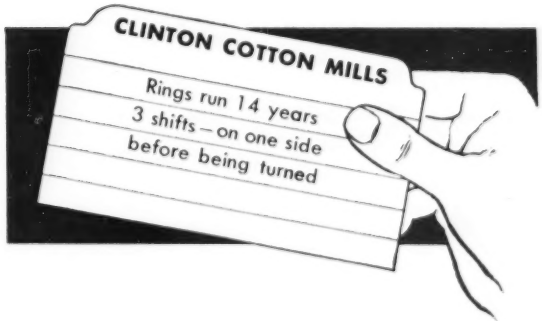
▸ Long-Life

Rings made of hard, fine-grained nickel-molybdenum electric furnace steel that will withstand abuse and give long life.

Trade Mark Registered

▸ Performance

Uniformly made on automatics with close tolerances, faces exactly parallel, Draper rings mean true traveler flight — *highest quality yarn.*



"Retaining Leadership through Research"

DRAPER CORPORATION

ATLANTA, GA. HOPEDALE, MASS. SPARTANBURG, S.C.

NEW!

GAS-FADING INHIBITORS

PERMALENE AF

DURABLE

Applied in the Dye Bath

Produces stable emulsions at all dyeing temperatures without additional emulsifiers — exhausts uniformly with the dyestuff in the same bath — provides a protective finish fast to washing and dry cleaning.

VELVAMINE PG

Applied as a Finishing Agent

Imparts superior protection against atmospheric fading — has no effect on light fastness of acetate colors — gives a soft mellow hand to the fabric.

VELVAMINE PGL

Applied in the Finishing Bath

Imparts excellent protection without appreciable change in hand of fabric — has no effect on acetate colors — is compatible with usual dullers, weighters and resins.

Write for literature

REFINED PRODUCTS CORPORATION

Manufacturing Chemists **LYNDHURST • NEW JERSEY**

Southern Representative: DYER S. MOSS COMPANY, 2511 Lucena St., Charlotte 6, North Carolina
New England Representatives: DONALD R. MacLEAN, Box 202, So. Dartmouth, Mass.
California Representative: SIDNEY SPRINGER, 311 S. San Pedro St., Los Angeles, California
Canadian Selling Agent: Reliable Color & Chemical Company, 85 Cannon St. W., Hamilton, Ontario
Export Division Manager: Chester Feil, Refined Products Corp.

Vol. 117, No. 5

Textile Industries

May, 1953

CONTENTS

Copyrighted 1953

Additional Items

Management

Employee Injuries at Home 91
Between the Cotton and the Cloth 91
Eleven Checks Total $1,463,371,812 117
Directory of Safety Posters for 1953 120
Tax Aspects of Life Insurance 131
Excess Profits Tax Takes Heaviest Toll from Small Business 157
Textiles in the West 207

Cotton

Tolerances Established in Instrumental Evaluation of Cotton 113
Difficulties on 10" x 5¼" Roving Frames 173
Wood Sleeve Adapter for Small Beam Pins 175
Jig for Setting Worm Gears on C&K Looms 177
Prevent Excessive Wear of Ends of Fluted Lap Rolls 181

Synthetics

Technique Shows Contribution of Fibers in Blended Fabrics 157
Old Model Drawing Frames Changed to Accommodate Long Staple Rayon 179
Survey of Orlon Suits 213
Dope-Dyed Protein Fiber for Use in Blends 215

Wool

Wool Moisture Standards 89
Seasonal Wool Gains Up 207
Detergent-Softener for Woolen and Worsted Knit Goods 226

Wet Process

Flameproof Cotton Fabrics 91
Common Salt and Glauber's Salt Interchangeable in Acid Dyeing Wool 125
The Crocking Problem in Naphthol Dyeing 163
A-C Drive for Finishing Ranges 223

Knitting

Expect More Pull Threads from 12 Denier 89
Sock Mystery Solved 93
Hosiery Heel Patented 213
Improved Tricot Knitter 217

DEPARTMENTS

Shorts and Remnants 4
Personal Notes 14
What the Textile Mills are Doing 28
News in Brief 59
Textile Industry Activity Charts 93
An Executive Views the News in Textiles 95
Future Events 97
New Equipment and Materials 99
How Other Men Manage 171
Suppliers' News 183
Helpful Booklets Free 199

Features

		SPIN-WEAVE	WOOL	SYNTHETICS	WET PROCESSING	KNITTING
70% High School Grads in This Mill	105	•	•	•	•	•
Weaving Filament Synthetics, Part 1	107			•		
Snapper Modification Pays Off for Full-Fashioned Mill	113					•
Double Trumpet Spinning; Its Effect on Yarn Strength	114	•				
They Are Watching You!	118	•	•	•	•	•
French Worsted Combs—Main Cog in Spinning System	121		•			
Clean Knitters Automatically	126					•
Osage's Quick-Stopping Warper	130	•		•		
Changing to Rewound Filling	132	•				
Research Findings—How to Improve Tear Strength	134	•				
Scroop Can Be Measured	136	•		•		
Dynamic Business—Our Best Guarantee of Progress	140	•	•	•	•	•
Cotton Textile Industry Progressive; Future Bright	143	•				
Engravings and their Effect on Textile Printing	149				•	
Display Board Guides Electricians	159	•	•	•	•	•
Our Debt to Technology	165	•	•	•	•	•

General and Technical

		SPIN-WEAVE	WOOL	SYNTHETICS	WET PROCESSING	KNITTING
Vertical Integration	89	•	•	•	•	•
Full-Fashioned Knitter Operates at 100 cpm	101					•
Suggestions for Accident Investigation	106	•	•	•	•	•
More Valuable Ratio Sought for Classification of Cotton Fibers for Maturity	125	•				
Effective Packaging Pays in Many Ways	129	•	•	•	•	•
Executives and Foremen Differ Regarding Supervisory Needs	131	•	•	•	•	•
Leno from Dobby Looms without Doups	133	•				
1952 Cotton Fiber and Spinning Test Results	167	•				
Preparing Wool Tensile Strength Fiber Bundles	168		•			
More on Slow Card Grinding	171	•				
Complete Washability for Rayons	231			•		

John C. Fonville ..... ***Editor***
J. Frank Guest ..... *Associate Editor*
Milton C. May ..... *Associate Editor*
Paul M. Platzman ..... *Associate Editor*
(22 Ridge Drive East, Flower Hill, Roslyn, N. Y.)
George H. Dockray ..... *Associate Editor*
(604 West Warren St., Shelby, N. C.)
H. B. Anderson ..... *Associate Editor*
J. A. Moody ..... *Production Manager*
EDITORIAL AND EXECUTIVE OFFICES: 806 Peachtree St., N. E., Atlanta 5, Georgia

Member of
Audit Bureau of Circulations
National Business Publications

John C. Cook ..... ***Business Manager***
Walter M. Mitchell, Jr. ..... *Assistant*

Business Representatives in U. S. A.

BOSTON—Arthur C. Shaw, *11 Monroe Rd., Wellesley Hills, Mass. (Phone: Wellesley 5-3648).*

NEW YORK—William K. Hoffman, *58 Euclid Ave., Maplewood, N. J. (Phone: South Orange 2-2484).*

PHILADELPHIA—Rodman Hanson, *708 Hendren St., Philadelphia 28, Pa. (Ivy Ridge 3-4176).*

CHICAGO—Maynard L. Durham, *333 North Michigan Ave., Chicago 1, Ill. (Phone: Central 6-6964).*

CLEVELAND—A. E. C. Smith, *609 Caxton Bldg., Cleveland 15, Ohio (Phone: Cherry 1-7352).*

PITTSBURGH-BUFFALO AREA—J. D. Parsons, *23 Border St., Cohasset, Mass. (Phone 4-0712).*

CHARLOTTE—W. Cliff Rutland, *Box 102, Gastonia, N. C. (Phone 7995).*

LOS ANGELES—L. B. Chappell, *6399 Wilshire Boulevard, Los Angeles 48, Calif. (Webster 3-9241).*

PUBLISHED MONTHLY at 116 E. Crawford St., Dalton, Ga., by W. R. C. Smith Publishing Company. W. J. Rooke, president; R. P. Smith, executive vice-president.

designed for TEXTILE INDUSTRIES

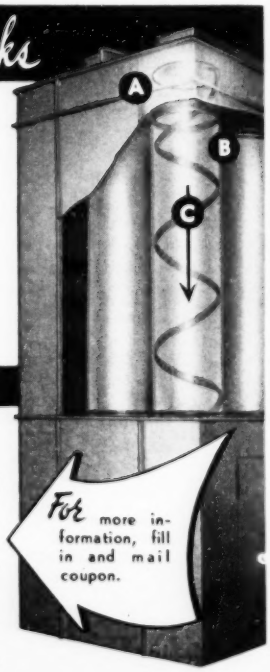
the SPIROKLEEN DUST COLLECTOR

by **TURNER & HAWS Engineering Co., Inc.**

Designed on the efficient filter bag principle of dust collection, SPIROKLEEN removes fibrous material and dust from textile mill air and recirculates the air 99.9+% clean.

In SPIROKLEEN, the polished aluminum spiral element continuously removes excess dirt from the inside surface of the filter bags, leaving a uniform deposit to provide an adequate filter effect plus high volume air flow without clogging. The combination of filter fabric with the uniform dust layer inside insures highly efficient air cleaning.

Here's how SPIROKLEEN works



A Dust laden air enters top of filter bags.

B Dust and lint is removed from air stream and retained inside filter bag.

C Rotating spiral element continuously removes excess material from the inside of the filter bags and deposits it in the hopper below.

For more information, fill in and mail coupon.

Turner & Haws Engineering Co., Inc.
87 Gardner St., Boston 32, Mass.

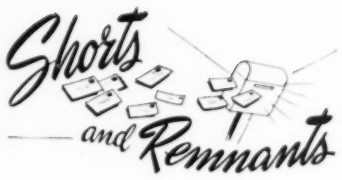
☐ Please send me more information on SPIROKLEEN
☐ Have representative call

Name _____

Address _____

City _____ Zone ____ State _____

Shorts and Remnants



► Well, we asked for it and got it. All remaining price ceilings have been lifted! Business firms need not make or keep records on future transactions. With more time on their hands now, mill management can drink a morning coke and occasionally pester the production departments.

► With ceilings removed, chickens in California started laying more eggs. Of course, they did it when music encouraged them, coming to the hen houses via loudspeakers. The joker was that price ceiling bookkeeping and regulations had kept the owner so busy that no time remained to play records.

► Behind the Iron Curtain a mill manager was asked by a party member how his textile production was going. "So well," was the answer, "that if it were piled high the textiles would reach the feet of the Saints." "But there are no Saints," said party member as he glared. Mill manager, "There are no textiles either."

► With tongue in cheek we published "So You Don't Want a Union" as the lead story in March. Without tongues in cheeks the mills asked us for reprints to distribute throughout the organizations. Early petitioners for the reprints have been served; a few more on hand for the asking. Strangely enough, the mills don't seem to want unions. Remember, fellows, even organizers have to eat!

► Along with other technical problems that came across the desk was this straightforward question, "What do you think about beam dyeing and package dyeing?" We think so too.

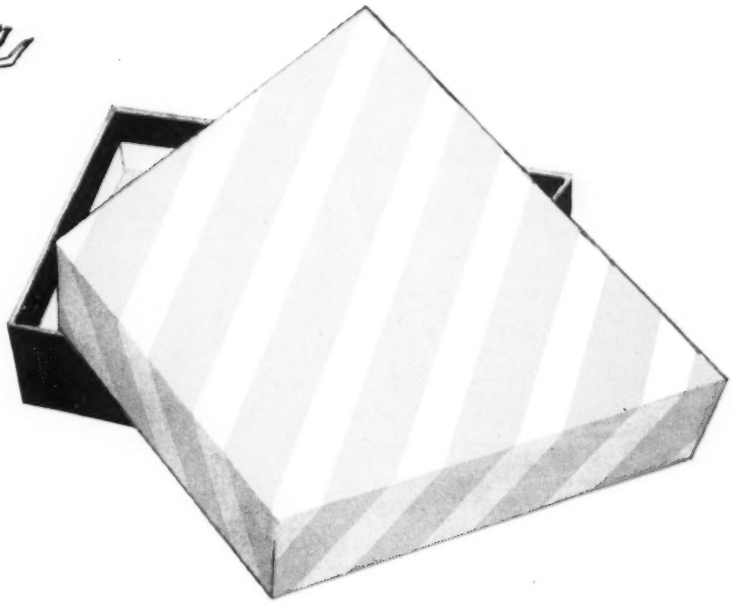
► But that wasn't as bad as the man who saw the sign hanging in a restaurant window and went in, ordering a double portion of Duncan Hines.

► From south of the border came a request that we send copies of TI to a foreign language textile magazine, along with blanket permission to reprint our articles. Another

will your product

be one of the

Best Dressed for '53?



Like fashions, styles in packages also change.
Let the designers at Atlanta Paper Company
create a new package for your product.
Call or write for further information.

APACO
ESTABLISHED 1890

ATLANTA PAPER COMPANY

Atlanta 2, Georgia

Shorts and Remnants

foreign language publisher had wanted not only reprint privileges, but our photo engravings as well. We do give reprint permission on specific articles, but we retain the blankets. However, on one abstract from TI in a European publication, the abstract turned out longer than our original. Thought all the time we had omitted something.

► A friend in the East points with pride to the important part pumps have played in the progress of civilization; they allowed pioneers to move away from rivers. Reminds us of other moves and the chiding another Easterner (mill man) was giving a Southerner. He said the Southerner's state was the only place that could compete with Chinese labor. (Our printing this one proves that we don't throw rocks at Sherman's statue.)

► Here is another that does not throw rocks and especially not at salesmen. Standard Pressed Steel has brought out a booklet emphatically entitled We Love Salesmen. Included is a map showing how to get to the plant and where the parking lot and wash rooms are located. That courteous treatment to visitors and salesmen goes a long way. But what? No bar and free lunch?

► Along about this time we're supposed to insert a paragraph patting our own back (it says in fine type). So we point to our own friendliness. Once we loaned our razor to a competitor. Stopped sharpening our pencil with a used blade and put it in the razor for him.

► The competitor returned the compliment by pointing out to one of TI's advertisers that his mag had about 40 subscriptions in a certain plant and the ad would do better in his book than in TI. 'Twas the truth about the subscriptions, so help us. But the plant had been out of business for a year and a half. Readership in an empty building goes TI one better.

► Readers should prepare themselves for a future series. A correspondent in England wishes to write for us. His qualifications: Has written for the "Meat Trades Journal" and the "Pawnbrokers' Gazette." They're allied fields.

► So you won't misdirect future mail, the former Pants Association has changed its name to the Trouser Institute of America. It covers the same territory.

► This month's textile intelligence briefed: Leonardo da Vinci (the painter) is accused of being the first air conditioning engineer (he constructed a giant wheel to pump air). Money could have been saved if other presidents (as well as Washington) had contented themselves with throwing a dollar across the Rappahannock. The government has purchased firecrackers in Florida and published a bulletin on "Hog Lice and Hog Mange." A wool textile operator after 40 years service discovered he was allergic to wool and won workmen's compensation. "Pood" is a word that means halfway between good and poor. A "megabuck" is a million dollars (current rate). The Navy has developed

NON-FLUID OIL
TRADE MARK REGISTERED

Ups Loom Production

Drip-less, waste-less NON-FLUID OIL, the leading lubricant in the textile field, *ups* loom production and outlasts ordinary oils 3 to 5 times. It remains *in* the bearings where it belongs—and off the goods and floor so provides *constant* lubrication, keeping machines in *steady* service and holding down oil bills.

Dripping, leaking, ordinary oil lowers loom production because it won't stay in bearings and creeps and spatters on warps, goods, and floor, causing oil spot "seconds".

A-#00000 grade NON-FLUID OIL is recommended for general oiling of looms. Write for Bulletin T-20 together with a free testing sample and prove for yourself that NON-FLUID OIL provides cleaner and better loom lubrication at less cost than ordinary oils.

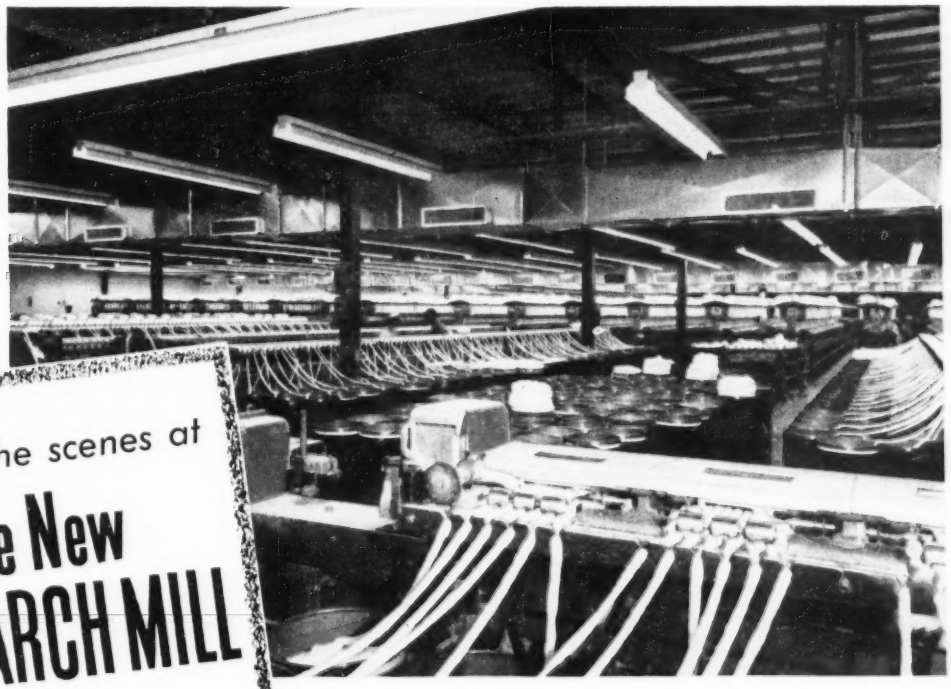
NEW YORK & NEW JERSEY LUBRICANT COMPANY
292 MADISON AVE., NEW YORK 17, N. Y.
WORKS, NEWARK, N. J.

Southern District Manager: Lewis W. Thomason, Jr.
Charlotte, N. C.

WAREHOUSES

Atlanta, Ga.	Detroit, Mich.
Birmingham, Ala.	Greensboro, N.C.
Charlotte, N.C.	Greenville, S.C.
Chicago, Ill.	Providence, R.I.
Columbus, Ga.	St. Louis, Mo.

NON-FLUID OIL is not the name of a general class of lubricants, but is a specific product of our manufacture.



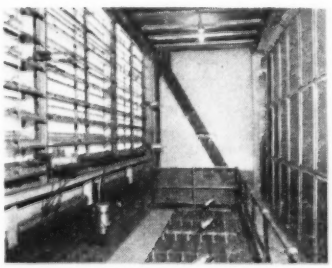
Behind the scenes at The New MONARCH MILL

The Monarch Mill, Ajax, Ontario. The air supply duct in background delivers washed, cooled and humidified air.

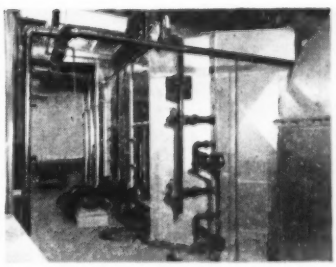
Making a vital contribution at Monarch . . . to better quality of product; higher, sustained machine speeds; greater worker comfort . . . is the central station air conditioning system, installed by Amco. This modern, efficient evaporative cooling system permits precise, automatic control of moisture content and cleanliness of air. It is one of the reasons why both men and machines are able to perform at their best . . . *always!*

Have you an air treatment problem? Perhaps you desire to air condition a single room . . . or maybe you'd like to have your complete plant provided with year 'round, atmospheric control. In these, as in all cases, Amco's sixty-four years of successful design and installation of *all types* of systems, in all combinations, will stand you in good stead.

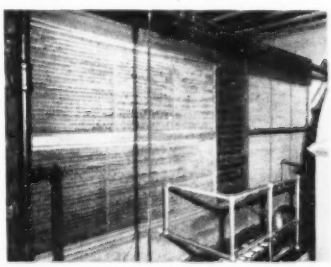
Amco can offer you a choice between humidification, ductless evaporative cooling, or central station air conditioning. You can depend on Amco to give you reliable advice and an expert installation of the system exactly suited to your needs. Call an Amco engineeer.



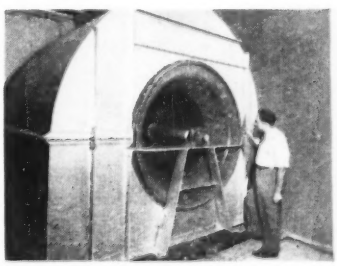
1. Plenum chamber, showing fresh air dampers at left, recirculating dampers at bottom, and lint screen at right.



2. Apparatus room for south system, with air washer and heater coils.



3. Heater coils and by-pass dampers located in the north system of mill.



4. Fan which propels the properly conditioned air through the distribution ducts.

AMCO AIR CONDITIONING SYSTEMS since 1888

Humidification • Evaporative Cooling (Ductless or Central Station) • Refrigeration

AMERICAN MOISTENING COMPANY, PROVIDENCE, R. I. • ATLANTA • BOSTON • CAMDEN • CHARLOTTE • AFFILIATED WITH GRINNELL COMPANY, INC.

DAYCO COTS with amazing new discovery, IBROCOL, *successfully combat eyebrowing!*

Thanks to a new synthetic rubber blend containing the amazing ingredient, Ibrocol, Dayton Rubber research has been able to develop an entirely new and different Dayco Cot — EW-465 — that successfully combats eyebrowing. Actual mill tests run on many frames prove this, and also that it drafts better yarn, requires fewer cleanings of the clearer boards, and runs longer between buffings than any other cot.

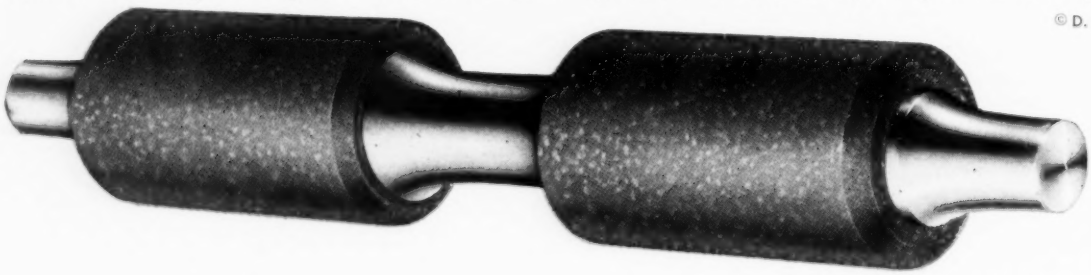
The addition of Ibrocol is the chief reason for this remarkable performance. Its chemical and mechanical action gives the cot a surface that maintains just the right coefficient of friction to remove only the short staple fibers and transfer them well back under the clearer board. Long staple fibers that could build up into eyebrows are left in the yarn. Hence there is less waste as well as less eyebrowing.

There's another big advantage too. The Ibrocol in the new Dayco Cot retards slicking and glazing. Thus the surface retains its coefficient of friction longer than any other synthetic cot. This means fewer buffings, greater savings.

In addition to its special features, the new EW-465 Dayco Cot also gives you all the other famous Dayco Cot advantages. They're unaffected by moisture or changes in temperature. Neither do they groove, pit, or develop flat spots. As a result of these many features, Daycos give you fewer ends down, less lap ups, less eyebrowing, better drafting on all types of frames using either natural or synthetic fibers.

Whether you want to overcome eyebrowing or any other cot problem, you'll find that Dayco Cots are the right answer to help you secure the highest quality production at the lowest possible cost. For the whole story, get in touch with your Dayco Representative today.

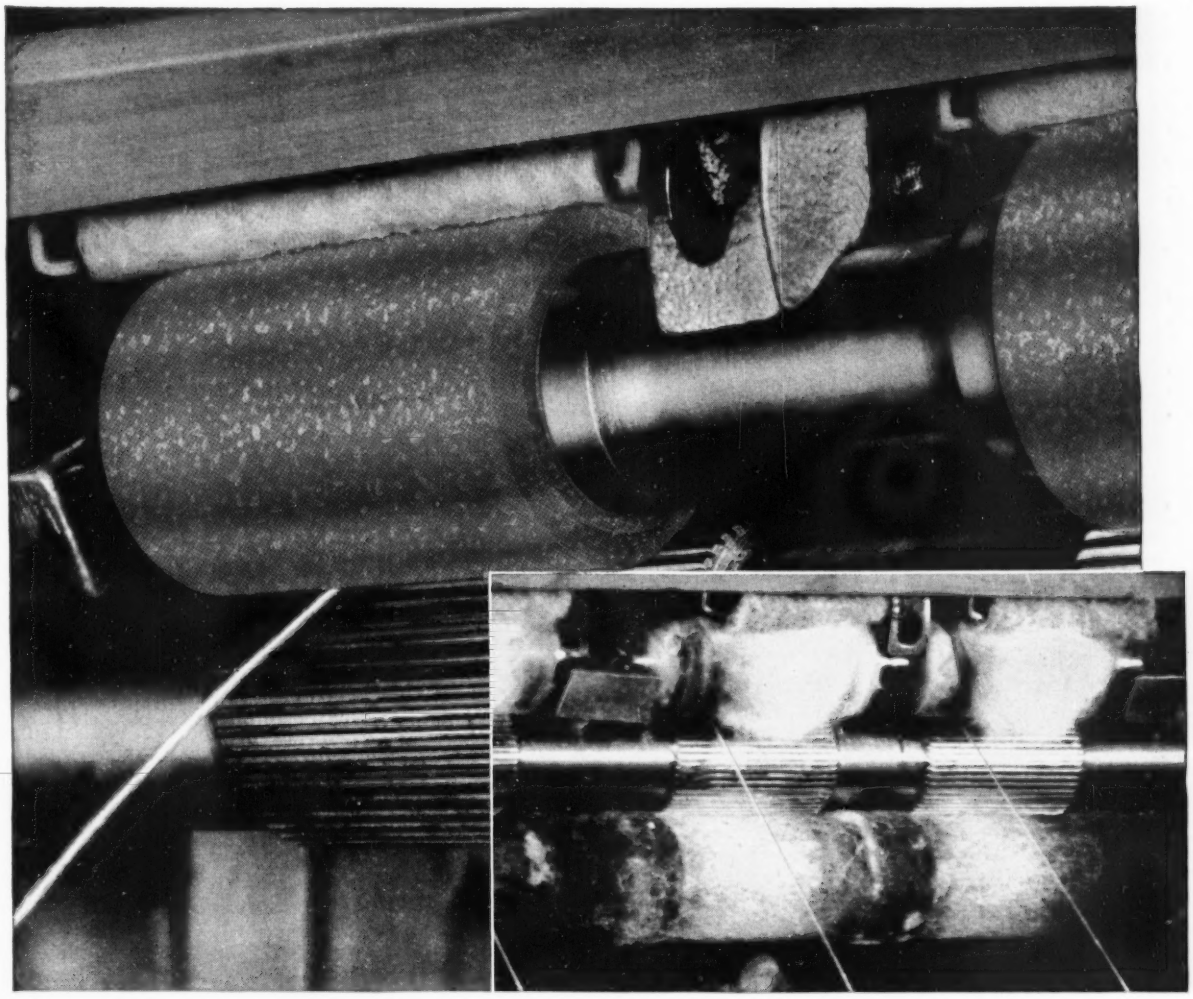
© D. R. 1953

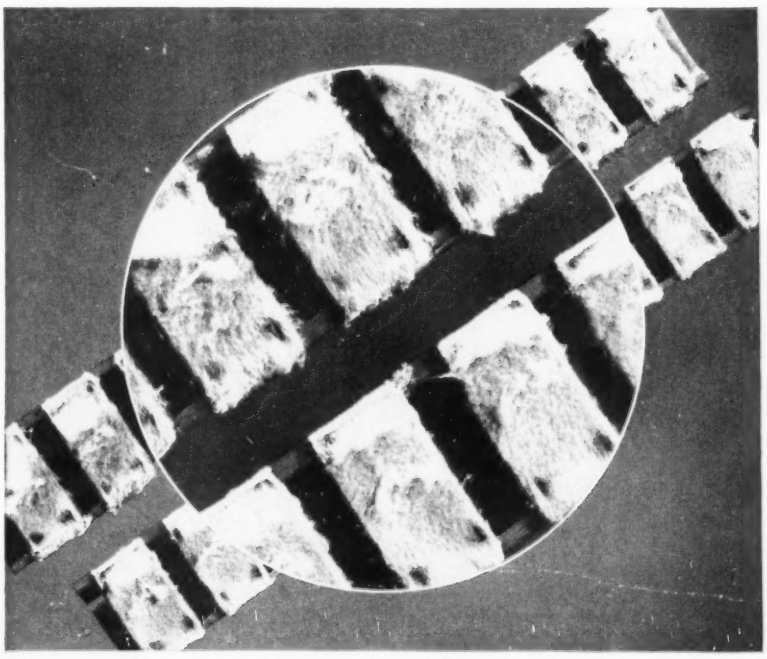


According to actual mill tests, this new Dayco Cot with IBROCOL successfully combats eyebrowing, drafts better yarn, and runs longer between buffings.

Dayton Rubber
Since 1905
Textile Products for Better Spinning and Weaving

DAYTON RUBBER CO., TEXTILE DIVISION, WOODSIDE BUILDING, GREENVILLE, S. C.





Compare the non-eyebrowing performance of these new EW-465 Dayco Cots shown above in the large illustration, with the condition of another make, shown in the inset. You immediately see why mills who have tried the new Dayco Cots are so enthusiastic. An accurate check in a great many mills over a period up to one year showed that the new Dayco EW-465 Cot did not eyebrow while other cots did.

The clearer board on the top came from a stand of new EW-465 Dayco Cots. These cots were run on the frame exactly the same length of time as the bottom clearer board taken from an adjacent stand of different make cots. Note the difference in the clearer waste. This is because the Dayco's remove only short staple fibres, packing them well back under the clearer board away from possible pickup by the end.

LAYING

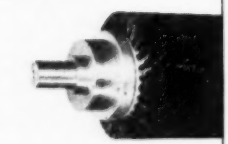
One of the most important factors in achieving top quality and peak performance in the manufacture of woolens and worsteds is the use of the right brush, correctly designed and constructed. The Jenkins' METLKOR brush for the woolen industry is just such a brush, developed out of three-quarters of a century of experience.

Specifically designed for processing these fabrics, the Jenkins' METLKOR brush will not sag, split, crack or get out of alignment. True-balanced and uniformly tufted to give uniform production, this brush—with any desired bristle on permanent metal core—will outlast other brushes many times while surpassing them in efficiency.

Leading textile machinery manufacturers for years have been using efficient Jenkins' METLKOR BRUSHES as an integral part of their equipment.

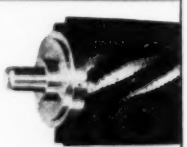
If you have any standard or special brush problems, write, wire or phone today, without obligation.

LIFEWOOD® *for wood core brushes and lags.*



RAISING

FLOCK



CARBONIZER

OTHER METLKOR BRUSHES FOR WOOLENS:

- BRUSHING MACHINE
- TEASELING
- TEASEL CLEANING
- CARDING
- WET CLOTH BRUSHING
- STEAMING
- PRESSING MACHINES
- SINGEING

M. W. JENKINS' SONS, INC.

Over Three-Quarters Century of Pioneering Brushes for Industry.

Cedar Grove, Essex County, New Jersey

TELEPHONE Verona 8-5337

Shorts and Remnants

a new "itchless" knitted underwear, thereby eliminating the pleasant and inexpensive pastime of scratching.

► You've a long way to go yet to finish this issue. Adios, and Keep Your Eye on TI.

Can You Supply?

" . . . have read the article on 'Garnetted Nylon in Wool Blends' . . . can you inform us the names of several spinners of this type of material . . . "

A. L. SHUFORD, Jr.
Secretary
Conover Knitting Co.
Conover, N. C.

To Each and Every

" . . . nice of you to send the engravings [of Bermuda trip photos] . . . have had some printings made of them . . . send them out to our membership . . . "

C. C. DAWSON
Executive Secretary
Southern Combed Yn Spin. Assn.

Readership Down Under

" . . . seen your article 'Work Load Calculations for Winding Machines' . . . reprints available . . . could you send four . . . "

BRADFORD COTTON MILLS LTD.
Sydney
Australia

► Reprints available. Your request will get them.

Terry Weaving

" . . . you ran a series of articles by T. Hargreaves on 'Practical Terry Weaving and Designing' . . . kind enough to send me two reprints . . . "

E. B. BERRY
N. C. State College
Raleigh, N. C.

► Sorry, no reprints made by TI. Mr. Hargreaves has placed in book form; his address: King Street, Iroquois, Ont., Canada.

Salary Ranges

" . . . would appreciate any information your magazine can furnish me concerning prevailing salary ranges for time study men in the textile industry. . . "

NAME WITHHELD

► Outside TI's scope. Mill men can get such data from each other.

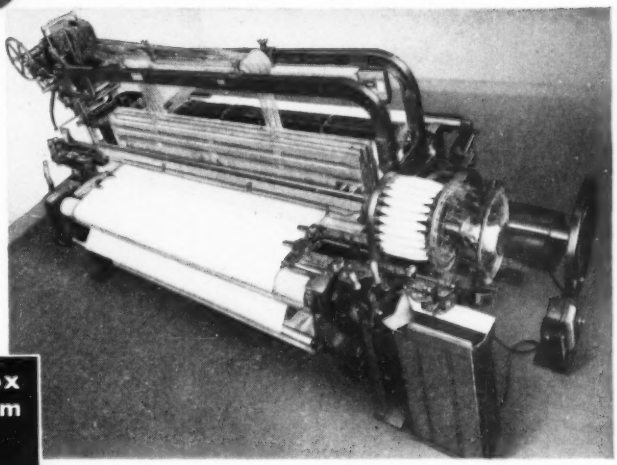
Fourth Dimension

" . . . during the three years I spent at Georgia Tech studying tex-

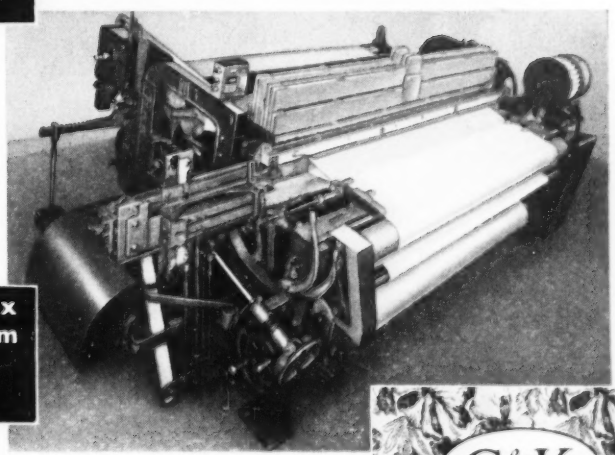
FIRST IN FILLING MIXING LOOMS

For many years, C&K has built multi-purpose Filling Mixing Looms with the Call Box feature. Now, out of this long experience, come these latest-design, *single-purpose* Filling Mixing Looms . . . to give you greatest return in saleable cloth per dollar of your loom investment.

But whether you need multi-purpose or single-purpose Filling Mixing Looms, the *first* thing to do is to set your sights by standards of *proven performance*. See C&K today!



New C&K 2x1 Box Filling Mixing Loom
equipped with
rotary magazine . . . and
HEAD MOTION



New C&K 2x1 Box Filling Mixing Loom
equipped with
rotary magazine . . . and
END CAM

Crompton & Knowles LOOM WORKS

WORCESTER 1, MASSACHUSETTS, U. S. A.

Philadelphia, Pa. • Charlotte, N. C. • Allentown, Pa. • Crompton & Knowles Jacquard & Supply Co., Pawtucket, R. I.

This "Invisible Trademark" Stands Back of the Trademarks of the World's Finest Woven Fabrics

It's a lot easier to work with RIDGID Extra-Utility Pipe Vises

Compare those work-saver RIDGID Vises with any others and you see the bonus of extra utility you get for your money. Kit vise is easily toted to the job, quickly clamped on edge of bench or plank, ready to use. All other RIDGID vises have handy integral pipe benders and rests to make cutting and threading easier. Full-width firm-gripping jaws of top quality tool-steel, bodies of rugged special malleable—for years of service. 9 models, yoke and chain, 23 sizes, meet every need. Get your money's worth—buy RIDGID Vises at your Supply House.

THE RIDGE TOOL COMPANY • ELYRIA, OHIO

RIDGID
Work-Saver Pipe Tools

Shorts and Remnants

tile engineering, I had great pleasure in being a regular reader of TI, profiting enormously from the valuable technical information published. . ."

R. J. EINSTEIN
South America

► Georgia Tech encourages students to read textile trade publications.

We Do Try

" . . . . to extend to you our best thanks for your untiring efforts in attending to all kinds of enquiries and in procuring for your subscribers information on a wide field of subjects."

G. A. ETTER
Vice-President
Spinnerei und Weberei Kottern
Kempten, Germany

Meet George H. Dockray, TEXTILE INDUSTRIES' new associate editor in the Carolinas. He comes from an old textile family and to TI straight from the technical department of the National Cotton Council of America.

George Dockray

George was born in Philadelphia, went to elementary school in Bennington, Vt., and got his textile engineering BS at Philadelphia Textile Institute.

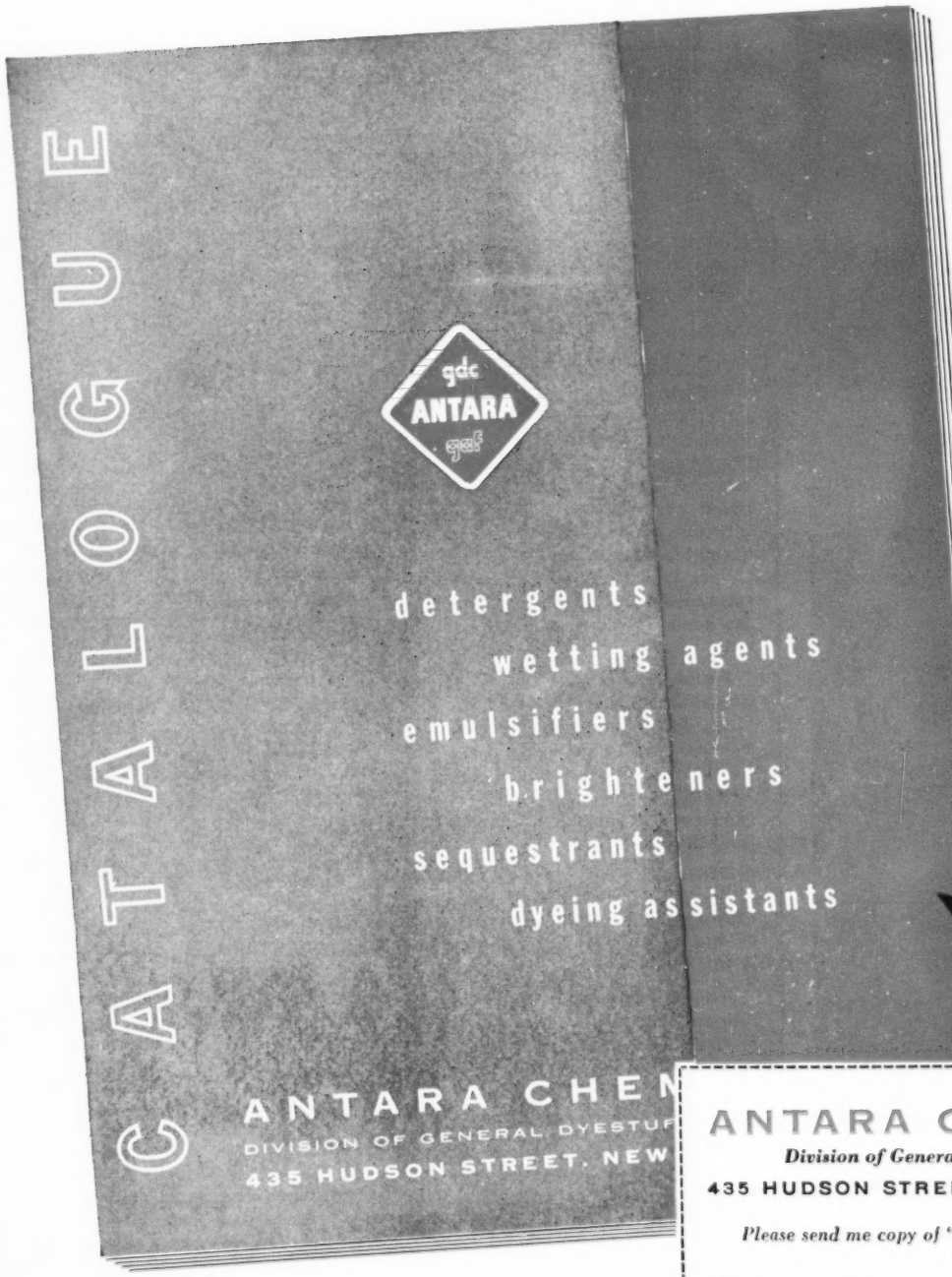
He has had experience in woolen and worsted plants, wet processing, knitting, synthetics, and cotton mills, has done research work, and a bit of textile teaching. As with all TI's editorial staff, his warping and woofing were interrupted by the shooting, and the 8th Air Force utilized his services in England. He still holds a reserve commission.

Uncle Sam lets him deduct for his wife, a girl of ten, and a boy of one. When things settle down at home, he likes to listen to Beethoven.

Some of his friends call him "Docker" and some George. We welcome him to our staff. Matter of fact, we've always wanted a "George." Now we can really "Let George do it!"

A BRAND NEW

ANTARA CHEMICALS CATALOGUE



a Complete 28-page Guide to Antara's Broad Line of Chemical Products

Here's a reference book that you'll want in your catalogue library. It introduces a simplified nomenclature system for Antara Chemical specialties and includes important application suggestions in a wide range of industries.

Fill in the coupon below and mail today for your free copy.

ANTARA CHEMICALS
Division of General Dyestuff Corporation
435 HUDSON STREET, NEW YORK 14, N. Y.

Please send me copy of "Antara Chemicals Catalogue"

NAME_____

TITLE_____

FIRM_____

ADDRESS_____

Stehedco
and
Southern

WORLD FAMOUS TRADE NAMES OF THE
STEEL HEDDLE MFG. CO.
and SOUTHERN SHUTTLES DIVISION

2100 W. Allegheny Ave. • Philadelphia 32, Pa.

Paris, Greenville, S. C.

Manufacturers of

Flat Steel Heddles • Loom Harness Frames • Loom Reeds (Pitch Band and All Metal, Regular and Stainless Steel Wire) • Loom Harness Accessories • Automatic and Hand Threaded Southern Shuttles (Tempered Dogwood, Persimmon, and Fibre Covered) • Warp Preparation Equipment • Electrode Rods (Fibre and Plastic Insulation) • Drop Wires • Creel Stop Motions • Pigtail Thread Guides • Tension Washers • Light Metal Stampings • Hard Chrome Plating • Hard Chrome Plated Parts • Rayon Cake Holder

268 McDonough Blvd. • Atlanta 1, Ga.

STEEL HEDDLE COMPANY OF CANADA, Ltd.

310 St. Hubert Street • Granby, Quebec, Canada

STEHEDCO and SOUTHERN Products
"Weave the World's Needs"

I-O-IX

Personal NOTES
ABOUT MEN YOU KNOW

Alex W. Bell was recently elected to the newly-created office of executive vice-president of American & Efird Mills, Inc. **James H. Martin, Jr.,** succeeded him as vice-president and general manager of manufacturing. Mr. Martin and **R. Dave Hall,** Climax Spinning Co., were elected to the board of directors, replacing William F. Mulliss and D. A. Bruton.

George E. MacLellan, formerly assistant treasurer, has been named treasurer of the American Woolen Co., succeeding F. S. Connett. **James M. Busher** has been promoted from acting manager of the National & Providence mills to resident manager of the Puritan Mill. He succeeds Charles E. Butterfield, retired.

Donald R. Belcher, financial consultant to the House of Representatives Appropriations Committee and former treasurer of the American Telephone and Telegraph Co., was recently elected a member of the board of directors of Botany Mills, Inc. Also elected was **Fred J. Beyer,** executive vice-president of P. R. Dreyer Inc. **Maurice G. Phillips** has succeeded Robert E. Kohn, resigned, as general superintendent of the mills.

Joseph A. Golden, head of the men's wear sales division in New York, **John Hutcheson,** in charge of Peerless Manufacturing Co., and **Lewis Hutcheson,** in charge of Peerless sales activities, were recently elected vice-presidents of Burlington Mills Corp.

Edwin M. Holt has left Erwin Mills, Inc. to assist vice-president Clarence N. Cone of Cone Mills Corp. in the operation of Proximity and White Oak plants.

John L. McDaniel has joined Consolidated Textile Co. Inc. as overseer of first floor weaving in the Lynchburg, Va., plant. **Walsie Robertson** has been promoted to assistant overseer of the carding department.

Alfred E. Holden has succeeded Clarence Burlingame, retired, as overseer of carding and drawing at Crown Manufacturing Co., Pawtucket, R. I.

Dan River Mills, Inc., recently elected the following new board members: **Robert O. Arnold,** Covington, Ga.; **William H. Barnhardt,** Charlotte, N. C.; **Robert T. Marsh, Jr.,** Richmond, Va.; and **J. Harvie Wilkinson, Jr.,** also of Richmond. **W. C. Harris** was elected vice-president of merchandising and sales. Promotions among manufacturing personnel are: **C. J. Jordan,** section superintendent in charge of carding and spinning in Schoolfield Division One; **Earl D. Jones,** technical adviser on carding and spinning to general superintendent R. E. Henderson; **George W. Ray,** general overseer of finishing at Schoolfield; and **Eddie Radford,** department overseer of the No. 3 twist mill.

Stiles R. Fifield, formerly branch manager of Volkart Brothers, Inc., Memphis, Tenn., has joined Fieldcrest Mills as director of raw materials purchasing. He is responsible for all purchasing of spot cotton and for advising the management of general cotton policies. **Edgar H. Gordon** has joined the Towel Mill as head piece dyer. **Jack P. Simpson,** formerly of the standards department, is now assistant foreman of the wiring department at the Electric Blanket Mill.

Raymond J. Barber, Jr., has been appointed controller of Flagg-Utica Corp., and **Lloyd L. Lively** is assistant to the president for the Utica Knitting Co. and Sherburne Yarn Mills division.

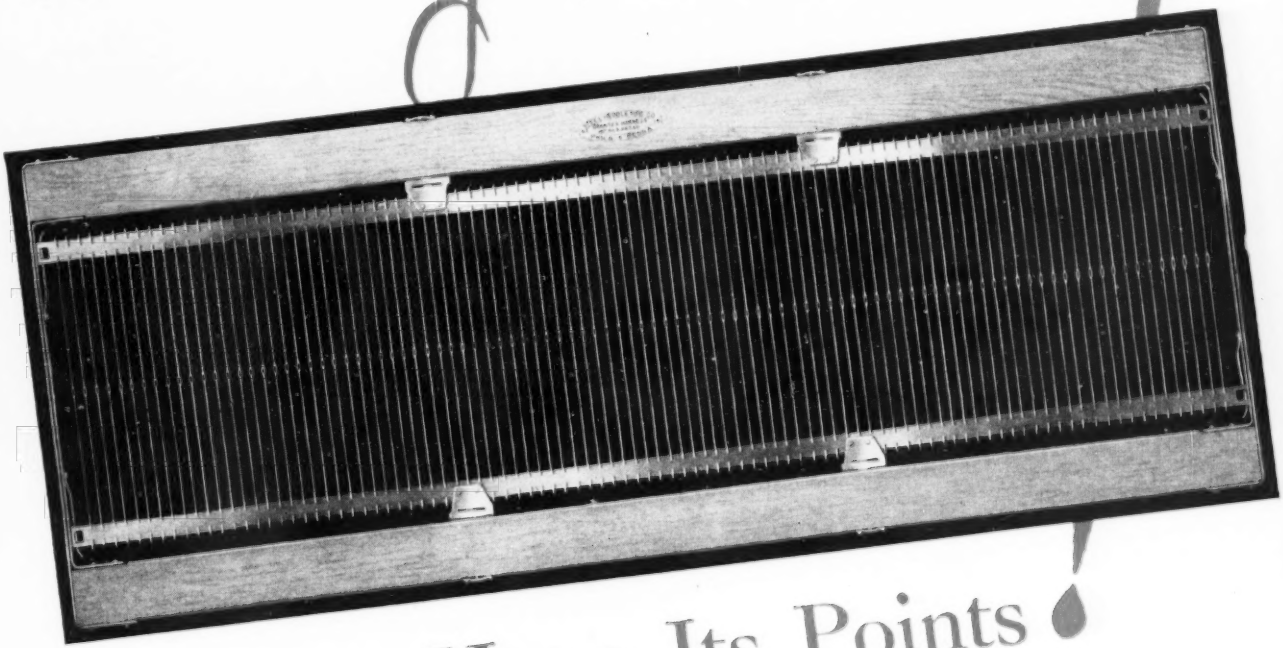
The new president of the Textile Bag Manufacturers Assn. is **Clarence E. Elsas,** president of Fulton Bag & Cotton Mills. **Richard K. Peek,** Percy Kent Bag Co., was elected vice-president.

Herbert Funke was recently made vice-president of Gilbertville (Mass.) Mills.

M. I. T. graduate students **Philip Sperling** and **Merwin Blum** are doing special research in the Lowell Textile Institute textile testing laboratories, in line with the cooperative plan of operation between the two schools. The students are candidates for the Master of Science degree in Textile Technology.

Francis White, president of Amer-

Being Firm...



Does Have Its Points!

The points when considering appropriate FRAME CONSTRUCTION built for the fabrics they were intended for, added up are;

1. STRENGTH AND RIGIDITY — To take any punishment high speed production inflicts.
2. LIGHTNESS IN WEIGHT — Provides ease of handling plus the strength required.
3. Constructed so that all wood parts are made from selected seasoned lumber free from knots; all metal parts being of rust resisting metal and designed for fool proof function of the frame.
4. Smooth face — no parts protruding — no rub, no cut.
5. Finger Tip controlled Heddle Bars of the finest tempered steel for quick release.

STEHEDCO FRAMES will always be the Frames for high speed production, because they were designed for it. There is a STEHEDCO FRAME constructed for the material you are weaving equipped with Stehedco patented Drawtex Heddles.

Consult your nearest Stehedco or Southern Field Engineer for the information you require.

Stehedco and Southern
WORLD FAMOUS TRADE MARKS OF THE
Steel Heddle
Mfg. Co.

STEEL HEDDLE MFG. CO., 2100 Allegheny Ave., Phila. 32, Pa.
SOUTHERN SHUTTLES Paris Plant...Greenville, S. C.
A Division of STEEL HEDDLE MFG. CO.
STEEL HEDDLE COMPANY OF CANADA, LIMITED
310 St. Hubert Street • Granby, Quebec, Canada

Other Plants and Offices: Greenville, S.C. • Atlanta, Ga. • Greensboro, N.C. • Providence, R.I.

-0-2

...From SPARTANBURG, S. C.

CDF TEXTILE NEWS

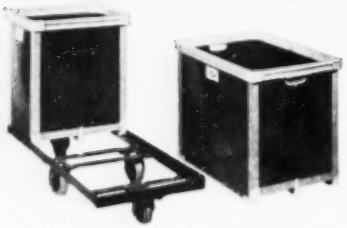
LOOM PARTS

KNIFE GUIDES Available in C-D-F Diamond Vulcanized Fibre or Celoron. Strong and straight.

PARALLEL PLUGS New and better! Made from molded Celoron, plug needs no lubrication, lasts for years, will not delaminate, splinter, fracture, or soften.

CLOTH ROLL BLOCKS
BINDER BUSHINGS

DOFFING TRUCKS



Two durable C-D-F Diamond Vulcanized Fibre boxes combined with a strong, easy-running truck. Smooth surfaces inside and out. C-D-F Fibre is lightweight, rugged, scuff-proof . . . lasts for years without maintenance. Low cost, attractive, amazingly strong and practical. Raised steel platform doffing trucks are also available; cross cleats in the undercarriage greatly strengthen the angle iron frame in this type truck.

PROMPT, EFFICIENT SERVICE FROM SPARTANBURG!

This new C-D-F plant and warehouse stores a wealth of interesting and vital plastics: Sturdy fibre sheets, a wide thickness range of Celoron gear stock, bins filled with loom parts and couplings. Here you can see the complete C-D-F receptacle line and feel the quality construction. And a C-D-F sales engineer is as near to you as your telephone. Call him today.

ALL PRODUCTS OF
Continental-Diamond Fibre Company
NEWARK 11, DELAWARE

. . . with Textile Headquarters at 834 Haynes Street, Spartanburg, South Carolina.

Call Spartanburg 3-6397 for DILECTO and DIAMOND FIBRE materials handling equipment . . . trucks, boxes . . . loom parts . . . top-speed shipments of CELORON silent gear blanks . . . friendly service from your C-D-F sales engineer.

Personal NOTES ABOUT MEN YOU KNOW

ican Woolen Co., has been named to a newly created advisory committee for the Lowell Textile Institute. The committee was formed to serve as liaison between the president of the school and the textile industry.

Roger D. Newell has succeeded his uncle, Carroll D. Newell, resigned, as vice-president of Cyril Johnson Woolen Co., Stafford Springs, Conn. He is also president of Newell Textile Sales Co., Inc., selling agent for the mill.

On June 1 **H. Wickliffe Rose**, general assistant to the president of American Viscose Corp., will become

Mr. Rose

associated with The Linen Thread Co., Inc. It is understood that he will become president when David Leonard Malcolm retires on July 1, after completing 50 years of service with the firm.

Magnet Mills, Clinton, Tenn., has elected **A. D. Crenshaw** executive vice-president and secretary of the firm. He was previously secretary-treasurer. New treasurer is **R. S. Moxley; Carl Kincaid, Jr.,** has been transferred from the manufacturing department to be assistant to the executive vice-president.

John E. Beaty, formerly with Hansen Glove Co., has been made general manager of Marinette (Wis.) Knitting Mills.

John P. Stevens, Jr., was elected to the board of directors, and **W. W. Greene** was made secretary, at the annual board meeting of Marion Manufacturing Co.

Ed Uzzell has joined Mooresville Mills as head of a newly-created fabric control department. **John T. Hicks** has been made manager of the decorative fabrics division.

William I. Hudson, Jr., owner of William I. Hudson, Jr., Co., Atlanta, Ga., has resigned as southeastern representative for Muscogee Manufacturing Co. and Reeves Brothers, Inc., and has joined Muscogee in an executive capacity.

Kenneth R. Miller was recently elected senior vice-president of the National Association of Manufacturers. **Christopher C. Gilson** was made vice-president in charge of field operations.

Arthur Woodbury, formerly with the Celanese Corp., has joined the staff of the department of textile research, School of Textiles, North Carolina State College.

Paul Groover, executive vice-president, was recently elected a director and member of the executive committee of Pacific Mills.

W. A. L. Sibley, vice-president of Monarch Mills, and **F. Sadler Love,** secretary-treasurer of the American Cotton Manufacturers Institute, were recently awarded honorary membership degrees in Phi Psi textile fraternity by the Iota chapter of Clemson College. At a joint meeting of the active and alumni chapters at the Alabama Polytechnic Institute's School of Textile Technology, the following were initiated: **Hamp Morris, III,** president of Geneva (Ala.) Cotton Mills; **Erwin Lehmann,** vice-president, West Point (Ga.) Manufacturing Co.; and **A. D. Elliott,** vice-president of Huntsville (Ala.) Manufacturing Co.

John L. Morgan, Jr., formerly assistant general manager of Stanley Mills division, has been promoted to assistant general manager of Republic Cotton Mills, Great Falls, S. C., also a division of J. P. Stevens & Co., Inc.

James Bennett, Ben Mayor, and **Durward Costner** were recently promoted to divisional superintendents at Rock Hill (S. C.) Printing & Finishing Co.

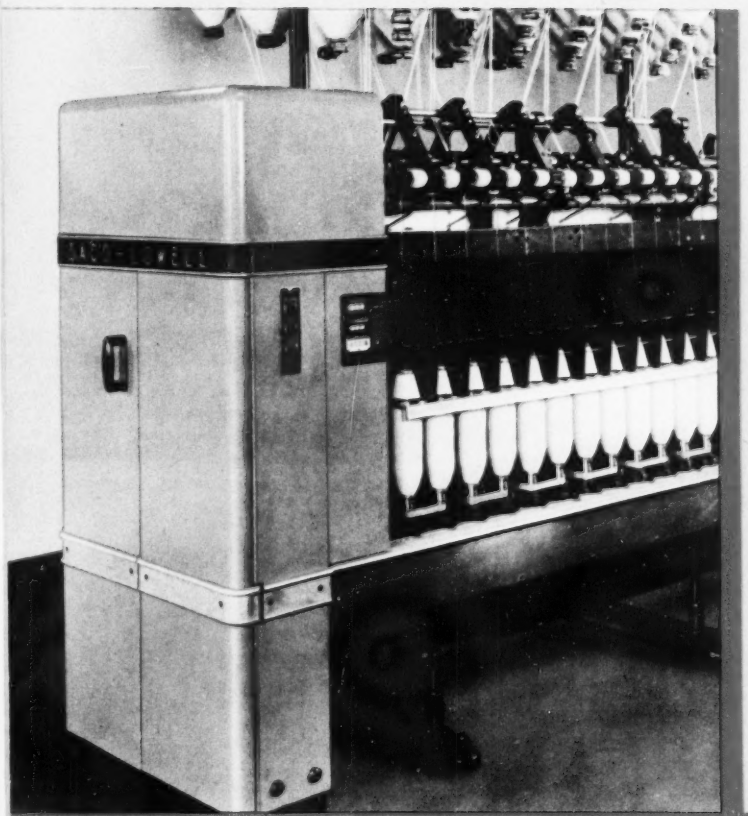
New officers have been elected to the Russell Manufacturing Co., Middletown, Conn., as follows: **Leo S. Sullivan,** vice-president in charge of automotive and aero sales division; **Peter F. Madsen,** vice-president in charge of belting sales division; **Bruce S. Williams,** vice-president in charge of material and production control; and **A. Paul Smith, Jr.,** secretary.

R. D. Redmond, formerly loom fixer on the first shift, has been promoted to overseer in the weave room

ALLIS-CHALMERS
TEXTILE DRIVES

New:

Air-Cooled Motor for Saco-Lowell SG-1 Spinning Frame



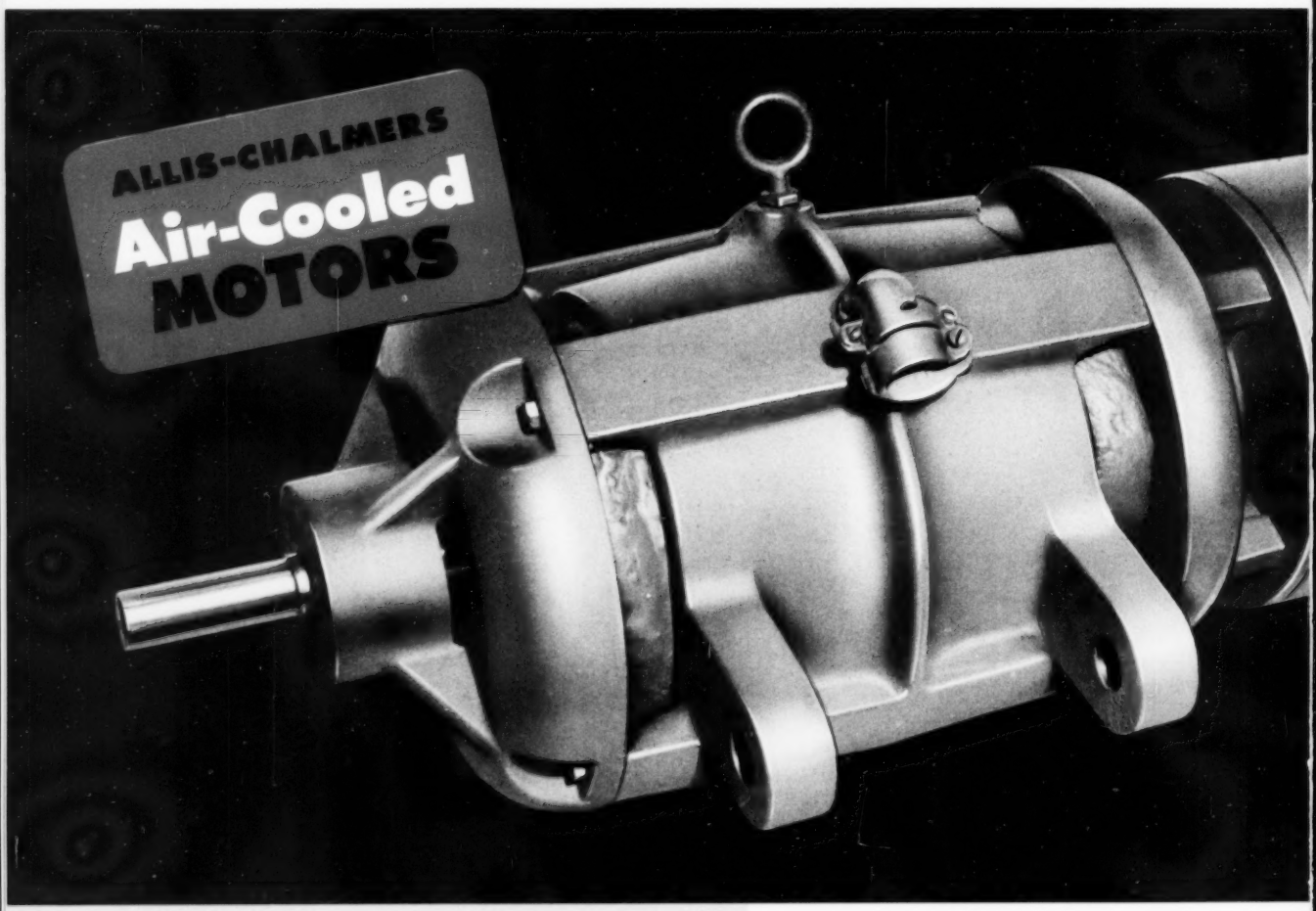
This motor is especially designed for use in textile mills. Allis-Chalmers offers the complete combination of motors, V-belt drives and control — undivided responsibility for everything from power line to driven shaft.

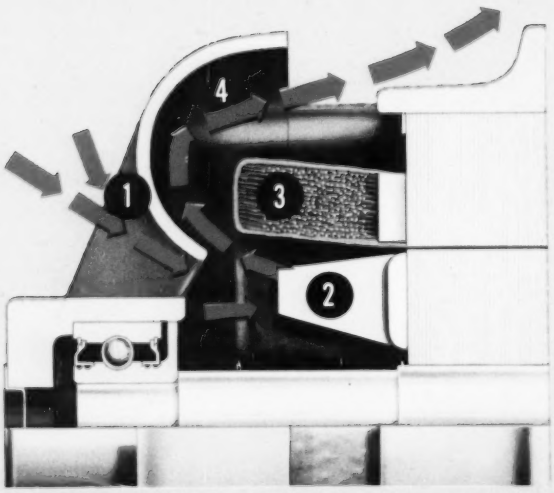
A-4022

ALLIS-CHALMERS

A-C ALLIS CHALMERS

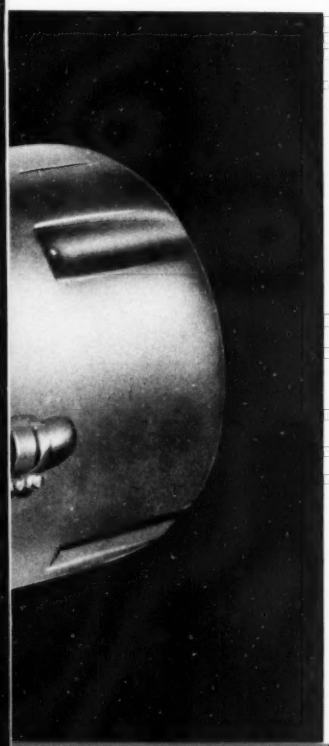
New Spinning Licks Problems of





1. Large air inlets with rounded corners and smooth surface permit fast flow of air.
2. Big fans keep cooling air moving swiftly through the motor.
3. Protected stator coil ends completely eliminate lint catching pockets and projections.
4. Large air outlets are shaped to aid air flow and keep air velocity high.

Frame Motor Space and Cooling



In order to cut space and improve appearance when designing their SG-1 frame, Saco-Lowell decided to place the motor and drive underneath.

Allis-Chalmers was asked to solve the problem of fitting a 20-hp motor into small space and cooling it adequately in this confined area. Both water-cooled and air-cooled motors were developed. Where hard water, or water with high iron content, creates softening and filtering problems that are difficult and expensive to solve, the air-cooled motor may be preferable. The water-cooled motor is offered and does have the advantage of relieving some load on the mill's air conditioning system.

Modifications of the long-known *Quick-Clean* textile motor were made to suit these special conditions. This motor has already been widely used for spinning frame duty in the humid, lint-laden air of textile mills.

Here is essentially all that is changed: the diameter of the motor is cut; the length is increased; special mounting lugs replace the feet; and a 50-pound brake is added. Rating, per Saco-Lowell specifications, is 20 hp, 1800 rpm.

Get complete details on this and other motors and drives for textile mills. Call your nearby Allis-Chalmers Distributor or District Office. Or write Allis-Chalmers, Milwaukee 1, Wisconsin.

Quick-Clean is an Allis-Chalmers trademark.

ALLIS-CHALMERS

SEND THIS COUPON TODAY

Allis-Chalmers Manufacturing Company
Box 77
Milwaukee 1, Wisconsin

Please send me the literature for designers checked below.

MOTORS

- ☐ Handy Guide to Motor Selection 51B6052
- ☐ *Quick-Clean* Textile Motors 51B6055B

CONTROL

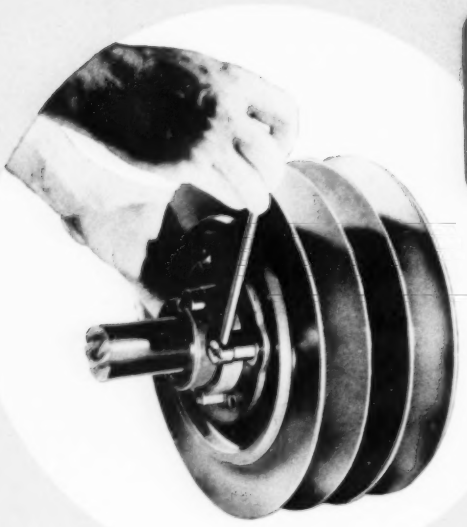
- ☐ Across-the-line Starters 14B7132
- ☐ Reduced-voltage Starters 14B7215

***TEXROPE* DRIVES**

- ☐ Wide Range Stationary Control Sheaves 20S7590
- ☐ *Vari-Pitch* Drive Engineering Data 20B7499

Name..... Title..... Company.....

Address..... City and State.....



ALLIS-CHALMERS V-Belt DRIVES

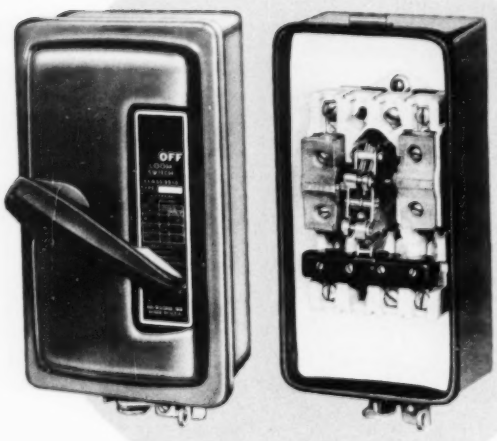
Save Time... Trouble! Adjust From Motor Side

New design of the wide range *Vari-Pitch* sheave permits adjustment from the motor side instead of the frame side, where space is limited. Turning a single screw with a straight lever rod is all that's needed to change sheave diameter. In addition, *Magic-Grip* taper-bore bushing has single lock nut for fast mounting.

Whether you are building or modernizing, it will pay you to discuss your drive problems with an Allis-Chalmers Authorized Distributor or District Office. Or write Allis-Chalmers, Milwaukee 1, Wisconsin.

SPECIFICATIONS — For use with Q or R section belts on motors ranging from 1½ to 30 hp with motor speeds from 900 to 1800 rpm.

Texrope, Vari-Pitch and Magic-Grip are Allis-Chalmers trademarks.



ALLIS-CHALMERS CONTROL

Get Specialized Control Engineered with the Drive

A LINE of full voltage and reduced voltage motor starters is available to meet the requirements of any type of textile motor drive.

Typical is this new loom motor manual starter. Its toggle action is preferable to push button operation for reasons of convenience when mounting starter in high or low positions.

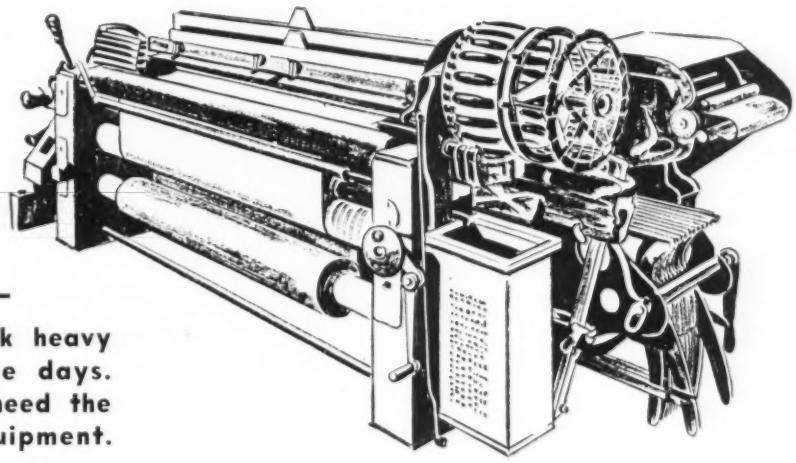
Loom switches and slow speed starters for card drives, and roving frame drives are also available.

Solve your control problems along with your drive problems by calling an Allis-Chalmers Authorized Distributor or District Office. Or write Allis-Chalmers, Milwaukee 1, Wisconsin.

ALLIS-CHALMERS

A-C ALLIS-CHALMERS

Milwaukee 1, Wisconsin



MR. MILLMAN—

You have to buck heavy competition these days. That's why you need the best possible equipment.

Some of our customers have compared all looms on the market. They tell us that for broad cloths and narrow fabrics they get the best results from Saurer looms.

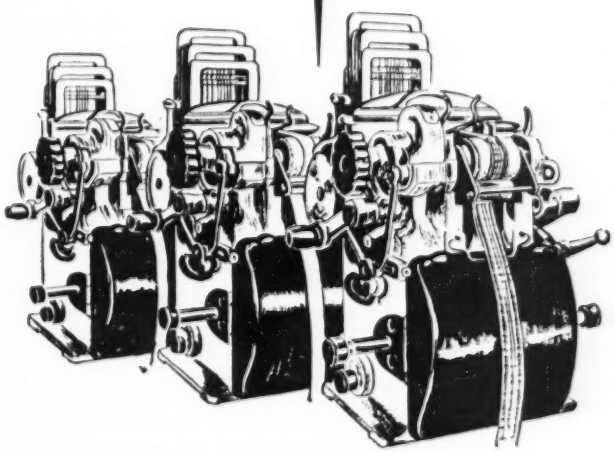
They find Saurer looms are ahead in
efficiency, versatility and reliability.

That means
higher output and lower maintenance costs.

For facts and figures, use the Reader Service or write to us direct.

SAURER

100 YEARS SAURER



SOCIETE ANONYME ADOLPHE SAURER, Arbon, Switzerland

People know when it "Runs in the Family"

Sometimes *every* member of a family is a success. And, though each is a specialist in a particular field, all of them contribute to the *family's* reputation.

The world-wide reputation of the house of Anheuser-Busch is like that . . . built by all of its divisions and departments, though each is a specialist in its own right.

The Corn Products Department of Anheuser-Busch is such a specialist . . . with special people and special products devoted entirely to the needs of the Textile Industry. Its technical staff has had notable success in solving problems for textile manufacturers; its advice and facilities are yours for the asking, without obligation.

Making friends . . . through performance and service . . . has been the *business* of Anheuser-Busch for more than a century.

CORN STARCHES
DEXTRINES — GUMS

Phone or write:

ANHEUSER-BUSCH, INC.
CORN PRODUCTS DEPARTMENT

ST. LOUIS, MO. 721 PESTALOZZI
CHARLOTTE, N. C. 1112 JOHNSTON BLDG.
NEW YORK, N. Y. 33rd & 12th Ave.

Personal NOTES
ABOUT MEN YOU KNOW

on the third shift at Seminole Mills, Statesville, N. C., a division of United Merchants and Manufacturers.

James J. Williamson is now in charge of all production at William Skinner & Sons, Holyoke, Mass.

John F. Baum, vice-president and executive officer of M. T. Stevens Southern division of J. P. Stevens & Co., Inc., has been made assistant executive officer of M. T. Stevens & Sons Co. division. He will have his headquarters at North Andover, Mass. **Raymond J. Roy** has been promoted to assistant overseer in the wet finish department of the Franklin, N. H., plant.

Eric Dawber has been appointed executive secretary of the Textile Technical Federation of Canada and head of the federation's permanent secretariat at 1410 Guy St., Montreal, Quebec.

Norman Alexander has joined Textron Inc. as merchandise manager of the tricot division. He was previously with Frank Ix and Sons and with Burlington Mills.

Guy G. Cromer has retired as chairman of the board of Textron Southern, Inc., under the firm's pension plan.

Henry Witosek is now supervisor of printing operations at the Gilbertville (Mass.) Mills plant of Ware Knitters, Inc. He succeeded Edward Faber, resigned.

New chairman of the Warp Knit Fabric Manufacturers Group of the National Federation of Textiles is **John P. Holmes,** vice-president and special assistant to the general manager of the textile division of Celanese Corp. of America.

The Royal Fabrics division of United States Rubber Co. has announced that **S. J. Bisko,** textile technician in charge of fabric designing, will add the duties of quality control and finishing plant liaison.

H. E. Anderson has been appointed assistant sales manager of knitting and tufting yarns for United States Rubber Co.'s textile division.

William S. Kilborne, vice-president of Wm. Skinner & Sons, Holy-

QUESTION

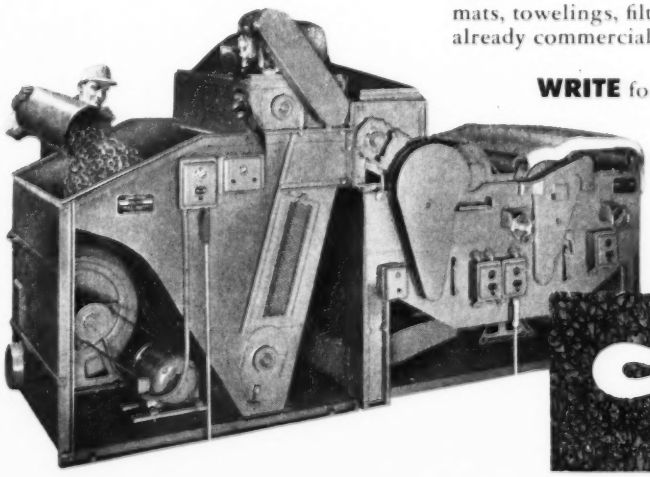
How many products can be made from RANDOM WEBS

ANSWER *Unlimited number . . .*

Your ingenuity is the only determining factor

Random fibers (non-oriented) webs or mats can be processed into hundreds of end products . . . products that are now being made by costlier processes from more expensive materials . . . products that are still in the laboratory. Random webs can be made from practically any waste or staple fibers by themselves or in combination. Fibers as diverse as cotton mill waste, nylon, glass, wool noils, asbestos, wood fiber, jute, rayon waste have been made into webs. Products such as insulations, reinforcements, mats, towelings, filters, drapes, clothing interlinings are already commercially manufactured.

WRITE for New Bulletin No. 102. Inquiries are welcome.



TEXTILE DIVISION

CURLATOR

CORPORATION

EAST ROCHESTER, NEW YORK

THICK LAYERS
OF RUBBER
LAYER OF
COTTON CORD

These long-wearing aprons help reduce yarn variation

Designed for modern textile machinery, Armstrong's Accotex® Aprons have the smoothness and uniformity absolutely necessary for spinning clean, uniform yarn.

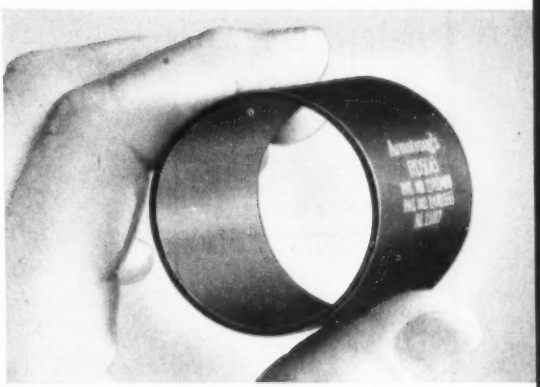
They have no seams to cause yarn irregularities or to give the erratic slip-roll action that's a frequent source of yarn faults on single-apron systems.

Just as important, every apron in a shipment of Armstrong's Aprons is alike. Like the machinery they run on, these aprons are precision-made. Each is carefully ground to the exact dimensions you specify and caliper-checked regularly to maintain this dimensional accuracy.

The cutaway drawing on the opposite page shows you how Armstrong's Accotex Aprons are made. The seamless outer layer is as smooth as this page. To make it that way, scuff-resistant synthetic rubber is given a satin finish and then treated chemically so it will stay smooth.

The middle layer of the apron is a band of strong cords that prevents stretching and curled edges, yet allows complete flexibility. The inside layer is synthetic rubber specially compounded to resist the abrasion it gets from the nose bar. Vulcanized together, these three layers form a strong, flexible apron that runs clean, handles yarn well, and gives 6 to 8 years of continuous service on most frames.

If you'd like to try aprons that perform like this, ask your Armstrong man to arrange for a test frame or write Armstrong Cork Co., Textile Products Dept., 6405 Ivy St., Lancaster, Penna. Available for export.



SEAMLESS. An Armstrong's Apron has no seams to crack or break, no seams to cause uneven drafting. On single-apron frames, the apron's super-flexibility lets it hug the nose bar, insures smooth slip-roll action.

SMOOTH FINISH. Your fingers will tell you that Accotex Aprons have a satiny feel. They're precision-ground to exact size, then given a patented treatment to make the surface smooth, clean-running, and scuff-resistant.

ARMSTRONG'S ACCOTEX APRONS

one of Armstrong's complete line of textile mill supplies

Platts'

The ORIGINAL PATENT . . .

METALLIC CARD

for COTTON, RAYON NYLON, WOOL AND CLOTHING

ALL STAPLE FIBRES

* 100 YEARS EXPERIENCE

ORIGINAL SUPPLIERS TO THE U.S.A.

PRODUCTION INCREASED BY 18%. SAVING IN WAGES 22%. REDUCTION IN LABOUR FORCE 33⅓% BY DOING AWAY WITH REGULAR STRIPPING & GRINDING

IDEAL FOR MAN MADE FIBRES

PLATTS' METALLIC CLOTHING PUTS THE FIBRES INTO THE WEB

SO WHY MAKE STRIPPING WASTE CHANGE TO PLATTS' METALLIC CLOTHING & SAVE THAT WASTE.

OUR TECHNICAL REPRESENTATIVE

Mr. LESLIE FIELD
230 PRINCETON Bde.
LOWELL - MASS.
Will be pleased to give Technical Information & answer your questions

AN EFFICIENT FITTING ORGANISATION

Also LARGE STOCKS FOR IMMEDIATE SERVICE AVAILABLE IN U.S.A.

U.S.A. STOCKISTS.
ASHWORTH Bros. Inc.
FALL RIVER - MASS.

PLATTS' ORIGINAL PATENT METALLIC CLOTHING GIVES A GREATER OUTPUT & MUCH BETTER YARN REGULARITY

ANNOUNCEMENT
OF THE PATENTEES & ORIGINAL MANUFACTURERS OF METALLIC CLOTHING

PLATT FRERES S.A.R.L.
108 BOULEVARD De LYON
ROUBAIX
FRANCE (NORD)

J. W. & H. PLATT LIMITED
BYRON WORKS, HARROW
MIDDLESEX - ENGLAND

Personal NOTES
ABOUT MEN YOU KNOW

oke, Mass., has been appointed a special aide to the Secretary of Commerce, Sinclair Weeks.

Reginald Kent is now overseer in charge of finishing operations at the Franklin Mill of M. T. Stevens & Sons Co.

Edward Bradford has left Crown Manufacturing Co. to be overseer of picking at the High Rock Mills division of Susquehanna Mills, Philmont, N. Y.

Obituaries

Joseph E. Boston, 49, sales engineer for the South Carolina territory of American Moistening Co., March 1.

Theodore Bausch Drescher, 58, vice-president of Bausch & Lomb Optical Co.

Fred C. Butler, 58, general superintendent of the Bemis (Tenn.) Cotton Mill.

Eugene Blumenthal, 77, secretary of Sidney Blumenthal & Co., Inc., March 11.

Morris Sayre, 69, president of Corn Industries Research Foundation, Inc., March 7.

Col. Daniel Moore Bates, chairman of Cold Spring Bleachery, Yardley, Pa., February 26.

Stuart D. Fisher, 71, former superintendent of Fisher Manufacturing Co., Fisherville, Mass.

Edward T. Fowler, 88, former president of Foster Machine Co., February 22.

Duncan D. Sutphen, 91, former president and board chairman of A. D. Juilliard & Co., Inc.

Harold Pratt, 62, manager of export sales department of Southeastern Cottons, Inc.

Victor J. Bissonette, 72, president of Standard Card Clothing Co.

M. Arnold Henderson, 58, midwestern sales representative of Standard - Coosa - Thatcher Co. on March 10.

George B. Haven, 81, retired professor at Massachusetts Institute of Technology.

Paul Schlosser, 59, research manager of Rayonier Inc., March 12.

"Want to know why I always go to SOLVAY *FIRST* for these Textile Chemicals?..."

REG. U.S. PAT. OFF.

. . . In a word—the answer is *service!* I mean sales service, delivery service, technical service.

Take delivery as an example. When I order textile processing chemicals from Solvay, I know I can depend on Solvay's efficient delivery service—from three convenient plants and over 200 stock points.

Occasionally, I run into a technical problem. Now here's where Solvay really shines, with an *exclusive textile* Technical Service that gives me the services of textile specialists—men who are experts in the textile business.

Yes, I have good reason for going to *Solvay first* for these textile processing chemicals."

SOLVAY PROCESS DIVISION
Allied Chemical & Dye Corporation
61 Broadway, New York 6, N. Y.

BRANCH SALES OFFICES

Boston • Charlotte • Chicago • Cincinnati • Cleveland
Detroit • Houston • New Orleans • New York • Philadelphia
Pittsburgh • St. Louis • Syracuse

SODA ASH

CAUSTIC SODA

LIQUID CHLORINE

SODIUM NITRITE

POTASSIUM CARBONATE

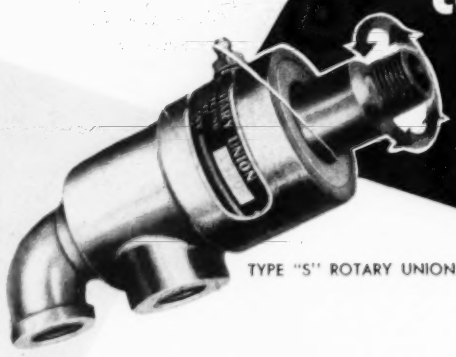
SOLVAY

Soda Ash • Caustic Soda • Potassium Carbonate • Calcium Chloride
Chlorine • Caustic Potash • Sodium Nitrite • Ammonium Bicarbonate
Cleaning Compounds • Sodium Bicarbonate • Snowflake® Crystals
Para-dichlorobenzene • Ortho-dichlorobenzene • Monochlorobenzene
Ammonium Chloride

ROTARY UNION

(REG. TRADE MARK)

a revolving steam connection



TYPE "S" ROTARY UNION

PIPE SIZES 1/4" THROUGH 3"

"Not one Burp all Year"

This was the pleased and surprised remark of a new customer who installed ROTARY UNIONS on his slashers. We were pleased but not surprised because ROTARY UNIONS are *guaranteed* to give perfect service for one year without mechanical maintenance of any sort*, and many run three years or more without any attention.

Get rid of your Saturday morning repair headaches and week-day tinkering and downtime on old fashioned stuffing boxes, packing joints, or ordinary steam connections. Install ROTARY UNIONS on your slashers, dry cans, calenders, printing, or coating machines, and you will be pleased and surprised too.

Contact our nearest office or write Dept. 5T for our Catalog.

*Make good on this guarantee is requested on less than 8 out of every 1000 units sold.

"Where *Good Connections* Count"

PERFECTING SERVICE COMPANY

332 Atando Avenue (Home Office and Factory) Charlotte, N.C.

Atlanta, Chicago, Cleveland, Philadelphia, Providence, New York, Montreal, Toronto

What the TEXTILE MILLS *are doing*

American Thread Co. has closed its Kerr Mills, Fall River, Mass., permanently. This was one of the original group of plants forming the company in 1898.

The **American Woolen Co.** is installing equipment at its new mill in Tifton, Ga., for manufacture of woolen and worsted goods.

As part of its expansion program for 1953, **Artcraft Mills, Inc.,** is spending a million dollars for new machinery.

Bara Dyeing & Finishing Co., which was recently organized as an interest of Inter-State Dyeing & Finishing Co., has acquired the mill of Dundee Finishing Co., 35 Eighth St., Passaic, N. J.

G. W. Borg Corp., Delavan, Wis., has purchased the plant of Seifert Woolen Mills, Jefferson, Wis., and will operate as a branch mill. The company has organized a new interest known as **Borg's Seifert Woolen Mills Division.**

Bruncote, Inc., was recently organized to operate a wool sorting and scouring plant. Richard A. Baldwin, 419 North Main St., Woonsocket, R. I., is representative and principal incorporator.

For thirty-five sons and daughters of employees of **Callaway Mills Co.** the prize for a recent essay contest is a week's trip to Washington, D. C., to be made this summer. The awards were based on the content of the essays, the youngsters' school records, and the record of school, church, and community activities as submitted by each contestant. A new ultra-modern elementary school has been constructed at a cost of $553,645, with furnishings, in the Callaway communities in LaGrange, Ga., funds for which were provided jointly by the city and the Callaway organizations.

The Carolina Mills, Inc., Newton, N. C., has under construction a one-story brick bleachery addition which will double the floor space of the present bleachery. Extra dye tubs and finishing equipment will be installed.

Chatham Manufacturing Co., El-

GET A BETTER PICTURE OF YOUR PEROXIDE BLEACHING OPERATIONS

Du Pont Bleachery Survey Pinpoints Production Problems ...Can Help Lower Your Costs

Production up 22½%! Water consumption down 48%! These are typical gains resulting from recent surveys by Du Pont specialists. This service may be able to help your mill reach or maintain peak efficiency.

Du Pont Bleachery Surveys are conducted by men with wide experience in all phases of textile bleaching. Without interrupting production, they spend from one to three days surveying a plant. Fuel, water and chemical consumption are studied . . . cloth production checked...quality of finished goods examined.

During their study, the Du Pont specialists take samples of cloth at each stage of the bleaching process. These samples, together with the necessary data, are sent to a Du Pont laboratory for complete analysis. Reports prepared by specialists are next reviewed by top experts and then forwarded to the mills. Included are recommendations for reducing costs and improving the product.

This valuable Du Pont service is offered without charge to all users of peroxide in the United States. Whether or not a survey is required, your mill's technical staff is invited to discuss bleaching problems at any time with Du Pont specialists.

DU PONT PEROXIDES

FOR TEXTILE BLEACHING

Available in drums and tank cars { "Albone" 35 . . . Hydrogen Peroxide, 35% / "Albone" 50 . . . Hydrogen Peroxide, 50%

DU PONT

BETTER THINGS FOR BETTER LIVING . . . *THROUGH CHEMISTRY*

SEND COUPON FOR DETAILS

E. I. du Pont de Nemours & Co. (Inc.)
Electrochemicals Department, Wilmington 98, Del.

Please send me more information about the free Du Pont Bleachery Survey. I am bleaching ☐ cotton ☐ wool ☐ man-made fibers.

*Name*_____ *Title*_____

*Firm*_____

*Street & No.*_____

*City*_____ *State*_____

TENNANT the sweeper that...

Tennant Model 36 Power Sweeper sweeping floors in famed turbo-jet plant of A. V. Roe Canada Ltd., Malton, Ontario.

...does the work of a CREW

Due to EXCLUSIVE engineering features, one TENNANT Power Sweeper usually replaces a 3 to 12-man pushbroom crew . . . and does a far cleaner sweeping job besides.

This explains why so many firms have *fleets* of several TENNANT Sweepers. Each machine promptly *pays for itself* in labor costs alone, usually in 90 days or so. And, thanks to superb construction, they stay on the job . . . usually for *years.*

THESE FEATURES CUT SWEEPING COSTS

Speed and maneuverability are expertly combined in a TENNANT Sweeper . . .

Instant reverse avoids hand shifting; one pedal for forward and reverse.

"On-a-dime" turns mean faster work in tight corners.

Large capacity, exceeds 90,000 sq. ft. per hour . . . covers 36" to 48" path. Gas or electric. (Smaller model sweeps 24" path.)

WRITE TODAY for free "Cost Savings Graph" for estimating possible savings with mechanized sweeping. Also illustrated bulletins on sweeper performance.

Tennant Electric Sweeper is quiet, dependable, sweeps full shift on one charge.

Tennant "24" Sweeper is fast and streamlined . . . ideal for narrow aisles. Big sweeper features.

TENNANT Established 1870

G. H. TENNANT CO.
2524 North Second Street
Minneapolis 11, Minnesota

HEAVY-DUTY INDUSTRIAL
POWER SWEEPERS

What the TEXTILE MILLS are doing

kin, N. C., has purchased **Leaksville Woolen Mills, Inc.,** Charlotte, N. C., through an exchange of stock. The Leaksville plants at Spray and Charlotte, N. C., will continue as a separate entity, and John L. Morehead will continue as president of Leaksville.

A one-story addition to the plant is under construction by **Clyde Fabrics, Inc.,** Newton, N. C.

The recently chartered **Coated Yarns, Inc.,** 172 Harrison Ave., Boston, Mass., will operate a mill for manufacture of coated cotton and synthetic yarns. Richard J. Brown, 10 Rogers Road, Chelmsford, Mass., is president.

Coats & Clark, Inc., is planning construction of a one-story building at Toccoa, Ga., to be equipped as a finishing mill.

Its second $2,400 scholarship fund has been awarded by **Collins & Aikman Corp.** to the Rhode Island School of Design. The scholarship will be offered first to children of employees.

A new line of annealed fiber glass tape is being manufactured by **Columbia Tape Mills, Inc.,** East Greenville, Pa.

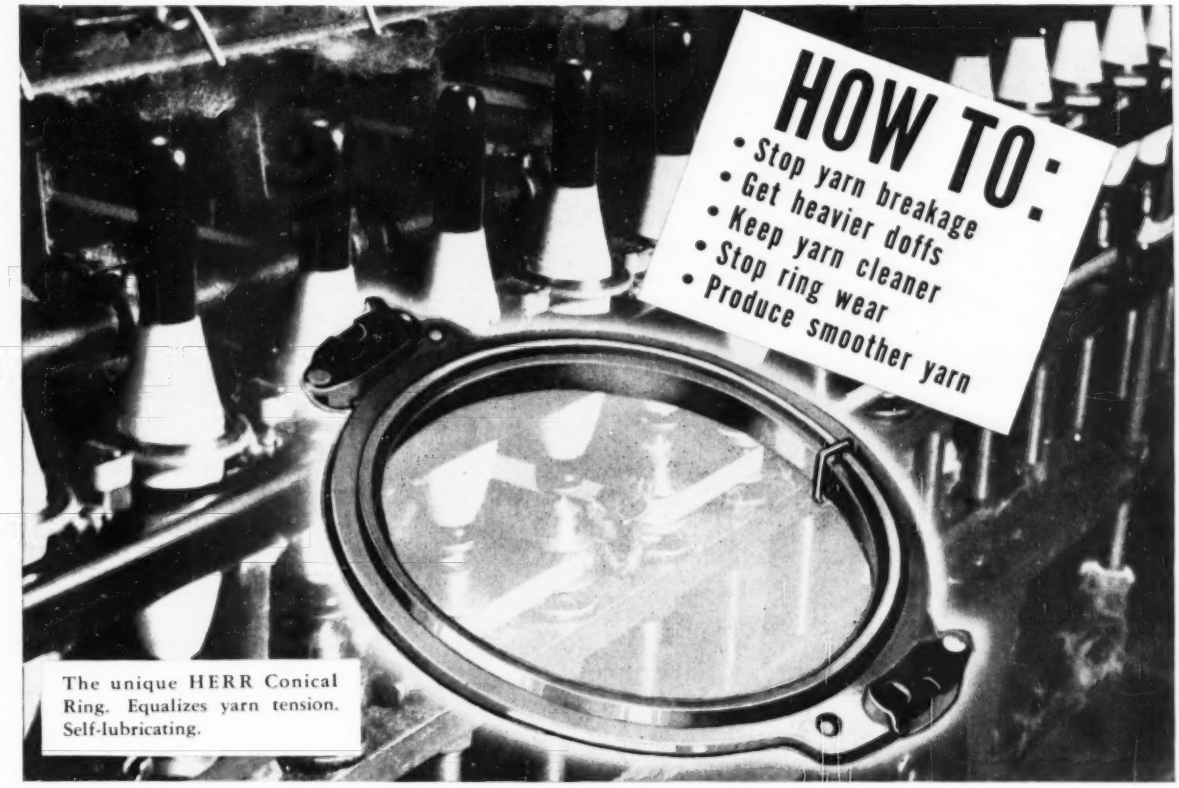
Cone Mills Corp. is closing its Asheville, N. C., mill, and the property will be sold. The Moses H. Cone Memorial Hospital, which opened on February 25, was built as a tribute by his wife, the late Bertha Lindau Cone, to the co-founder of Cone Mills Corp., who died in 1908. The $5,000,000 hospital is considered the most modern in the South.

A building in Charlotte, N. C., previously owned by Saco-Lowell Shops, Inc., has been acquired by **Duplan Corp.** and will be occupied for main headquarters of the firm's southern mills.

Hatch Mill, an interest of **Deering, Milliken & Co.,** has completed an expansion program at the plant in Columbus, N. C., with installation of additional machinery and facilities for increased production.

Elastic Threads, Inc., recently chartered, has under construction a one-story mill at Rumford, R. I.

An expansion and improvement



The unique HERR Conical Ring. Equalizes yarn tension. Self-lubricating.

FREE INFORMATION for spinners and twisters

of:

- Nylon
- Cotton
- Wool
- Rayon
- Silk
- Worsted
- Orlon
- Vicara
- Dynel
- Fiber glass
- Fiber blends
- Acrilan
- Dacron

• HERR Conical Rings adapt your equipment for any textile fiber or blend. Whether you use natural, synthetic or a blend of these fibers, you'll get more production at lower cost with conical rings. And you can get conical rings only from HERR. Whatever spinning or twisting problems you have, you'll find HERR glad to offer friendly advice and engineering counsel. Mail the handy coupon below today for FREE information on HERR Conical Rings.

HERR

MANUFACTURING CO., INC.

310 FRANKLIN STREET, BUFFALO, N. Y.

HERR Manufacturing Co., Inc.
310 Franklin Street
Buffalo 2, New York

Without obligation, send me complete information on how HERR Conical Rings increase production and cut costs!

Name ..... Title .....
Company .....
Address .....
City ..... State .....

SCALES CONTROL COSTS

Check your needs now!

Production-wise and cost-wise . . it makes good cost sense to be sure you have enough scales—and the right scales—throughout your plant today!

A scale survey by your nearby Toledo office will supply this information for you—without obligation. It will point out *proven ways* to solve your problems in weighing, checking, testing, counting, batching, force-measuring and other operations . . . with a modern Toledo! Learn how Printweigh can stop the losses that occur through human errors. It will pay you to get in touch with your Toledo office—in the phone book in 200 cities. Or write for bulletin 2020, a condensed catalog of modern Toledos. Toledo Scale Company, Toledo 1, Ohio.

SERVICE
Factory-Trained
200 Cities

TOLEDO®

HEADQUARTERS FOR SCALES

What the TEXTILE MILLS are doing

program that will include erection of a three-story extension to the plant and several new buildings, is under way at **Fenwick Hosiery Mills, Inc.**, Belmont, N. H.

Goodyear-Clearwater Mills are installing additional equipment in Mill No. 2, Rockmart, Ga., for production of rubberized fabrics.

Great Lace & Embroidery Co. was recently organized, with Herman E. Botwinik, 3510 Bergenline Ave., Union City, N. J., attorney and representative.

Gurney Manufacturing Co., Prattville, Ala., compiled the best safety record of any mill in the state during 1950, 1951, and 1952, enabling the Alabama branch of Gastonia Combed Yarn Corp. to be awarded the permanent possession of the Comer Textile Safety award for the third consecutive year.

The Attawaugen, Conn., plant of **Powdrell & Alexander, Inc.**, has been purchased by **Louis Hand Inc.**, Fall River, Mass., curtain manufacturers.

The Glen Raven, N. C., mill of **Holt Hosiery Mills, Inc.**, is undergoing an expansion program which includes a one-story, air-conditioned addition. New knitting machines for full-fashioned hosiery manufacture are being installed.

Howard Knit Products, Inc., has removed its equipment from the mill at Bessemer City to a one-story building at Gastonia, N. C.

A one-story addition to the plant, for warehouse expansion, has been constructed at **Jantzen Knitting Mills, Inc.**

Kingston (R. I.) Yarn Mills, Inc., has been chartered to operate a rayon yarn mill. The company is represented by Charles M. Robinson, Industrial Trust Building, Providence, R. I.

Linn Mills Co., Landis, N. C., has an expansion program under way at its branch mill at Concord. A multi-story addition is being erected, and new yarn machinery will be installed.

An investment of approximately $400,000 is being made by **Paola Cotton Mills**, Statesville, N. C., for an expansion and improvement program at the mill. A one-story addition is

Whatever your deterging or emulsifying problem...

Choose Jacques Wolf & Co. Chemicals

CONCENTRATED • LABORATORY CONTROLLED • LOW COST

NON-IONIC

Emulsifier L-32: *Fatty Acid Polyglycol Ester*
Detergent L-89: *Alkyl Polyglycol Derivative*
Detergent O-245: *Soluble Fatty Acid Amide*

ANIONIC

Oratol L-48: *Sodium Salt of a Sulpho Ester of a Fatty Acid Amide*
Selapon Gel: *Sodium Oleyl Methyl Taiuride*
Parnol 40—40% active
Parnol 80—80% active
Parnol Liquid—35% active } *Sodium Salt of Sulphonated Dodecyl Benzene*
Wetsit: *Alkyl Aryl Sulphonate*

CATIONIC

Lupomin W-1300 Series

QUATERNARY AMMONIUM

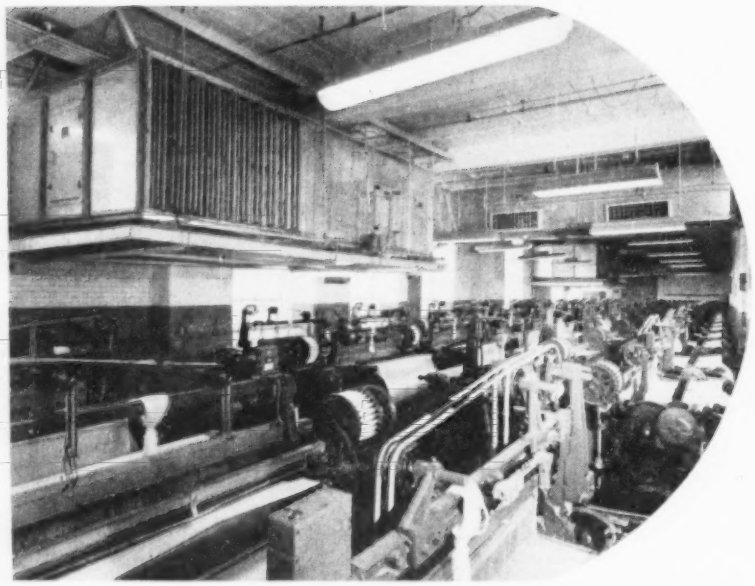
Lupomin W-1400 Series

Samples available on request

JACQUES WOLF & CO.
Chemicals PASSAIC, N.J.

Plants in: Clifton, N.J., Carlstadt, N.J., Los Angeles, Calif.

New Suspended Air Washer Systems Now Available



Synthetic yarn weaving room with new WHITE suspended air washers in Grendel plant of The Abney Mills, Greenwood, S. C.

The new White suspended air washer system employs a spray generating chamber and specially designed spray generator. The unit is all aluminum construction which makes it possible to be installed in existing mills without major reinforcing construction, alteration of present building or construction of apparatus houses.

The system is designed so that it requires minimum maintenance and service. Flexibility of application makes it possible to add new units if internal load changes.

White and Company—specialists in air-conditioning—employs an efficient and competent staff of workmen for the rapid installation and servicing of air conditioning equipment for the textile industry.

Estimates and specifications furnished without obligation.

WHITE & COMPANY, INC.

AIR CONDITIONING • HUMIDIFYING • VENTILATING • HEATING

1440 S. Tryon St. P. O. Box 533 Phone 2-7719 Charlotte, N. C.

What the TEXTILE MILLS are doing

being built and new carding machinery will be installed.

Marion (N. C.) Manufacturing Co. has installed additional equipment in its newly completed one-story addition to the plant.

A new one-story building, to be owned by the town and occupied by the company under long-term lease, is under construction in Guin, Ala., for **Marion Mills, Inc.**

Newton (N. C.) Knitting Mills, Inc., has been leased by **Hutchens Hosiery Mills, Inc.,** and the new company has begun operations.

Page Woolen Mills, Inc., was recently chartered to take over and operate a mill at Salem, Ore. Chester A. Page is president of the new company.

The **Philadelphia Textile Institute** was host recently to a team of French research engineers and statisticians who are studying U. S. quality control methods.

New equipment is being installed at **Photo Print Fabrics, Inc.,** a textile printing and finishing mill at Peterborough, N. H.

Prim Hosiery, Inc., Chester, Ill., has a modernization program under way, with additional knitting machinery and auxiliary equipment to be installed.

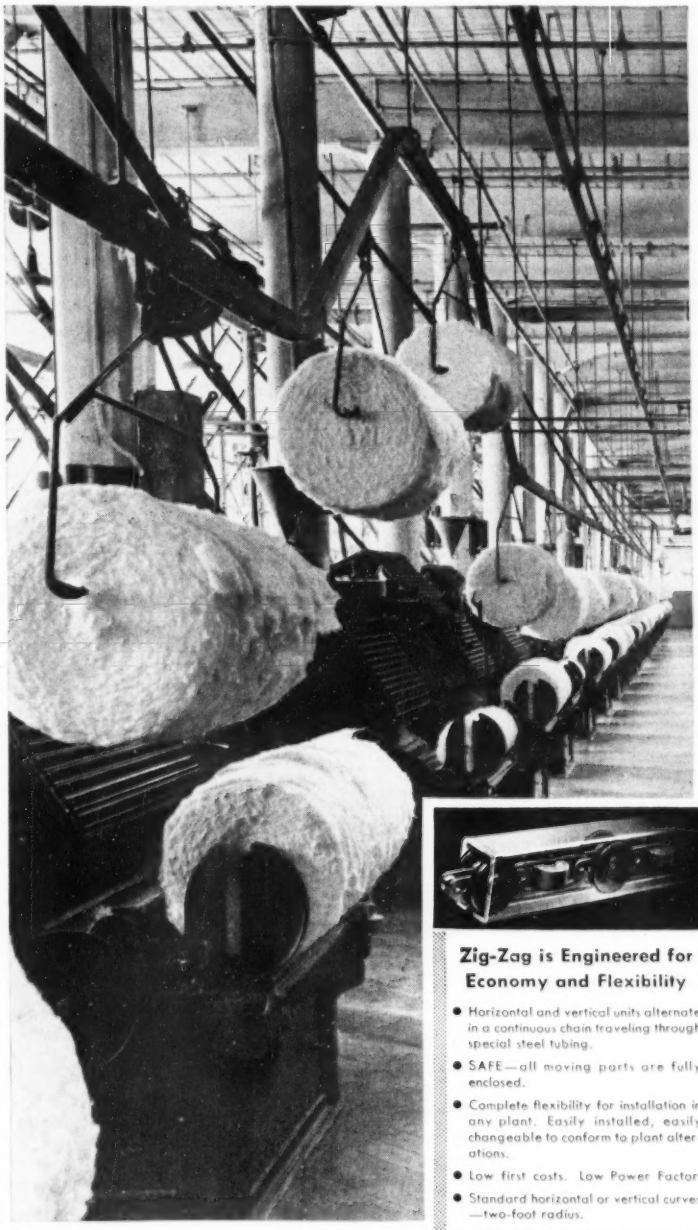
The plant of **Samarkand Rug Co.** at Rock Hill, S. C., has been purchased by **Rock Hill Printing & Finishing Co.** It will be used as a warehouse facility.

Rundy Textile Mills, Inc., recently chartered, will operate a mill for manufacture of knit outerwear. Luther Georges, 15 Park Row, New York City, is attorney and representative.

An addition to **Shenandoah (Va.) Knitting Mills, Inc.,** now under construction, will provide facilities for 100 additional employees, and is expected to cost about $250,000.

Certain equipment of Niagara Textile Co., Lockport, N. Y., has been purchased by **South Carolina Mills,** and is being moved to Spartanburg, S. C., for installation in the mill. The firm has also announced plans for a new weaving mill to be located

Get **maximum** **efficiency** from production space



Zig-Zag is Engineered for Economy and Flexibility

- Horizontal and vertical units alternate in a continuous chain traveling through special steel tubing.
- SAFE—all moving parts are fully enclosed.
- Complete flexibility for installation in any plant. Easily installed, easily changeable to conform to plant alterations.
- Low first costs. Low Power Factor.
- Standard horizontal or vertical curves —two-foot radius.

with R-W "Zig-Zag"®

Continuous Power Conveyors

Modern industrial methods call for maximum utilization of existing space for production and processing lines. And the materials handling problem is effectively solved with R-W ZIG-ZAG Continuous Power Conveyors. ZIG-ZAG keeps things moving—curving around and above crowded, congested areas. It releases valuable space for extra production . . . releases valuable workers for other jobs . . . reduces handling mishaps and bottlenecks to a minimum.

* * *

Find out how you can lower production costs and get maximum efficiency from your existing space. Write today for consultation. There's no obligation on your part.

You are invited to visit our booths, Nos. 1552 and 1556 at the Materials Handling Show in Philadelphia.

1880 RICHARDS WILCOX R-W AURORA Reg. U. S. Pat. Off. 1953

SLIDING DOOR HANGERS & TRACK • FIRE DOORS & FIXTURES • GARAGE DOORS & EQUIPMENT • INDUSTRIAL CONVEYORS & CRANES • SCHOOL WARDROBES & PARTITIONS • ELEVATOR DOOR OPERATING EQUIPMENT

Richards-Wilcox Mfg. Co.

"A HANGER FOR ANY DOOR THAT SLIDES"

440 THIRD STREET, AURORA, ILLINOIS

STEP UP PRODUCTION, SAVINGS, AND QUALITY WITH FIELDEN DRIMETER MOISTURE CONTROLS

Savings based on the experience of Drimeter users will more than pay for the control in less than six months. For example, a completely automatic Fielden Drimeter installation, costing less than $2,500, saved the purchaser over $6,000 in the first year of operation, or better than 140% interest on his money invested the first year.

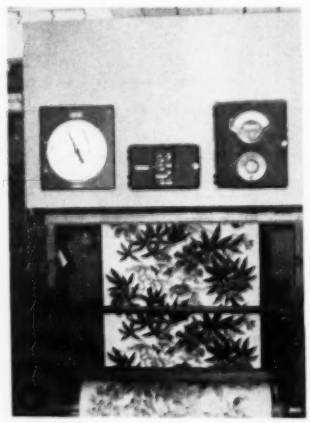
Users Report Many Benefits

Drimeter users find many benefits reflected in the quality of the goods they process. Some typical comments are "Drying speeds can be increased by safely raising the temperature, as Drimeter control permits us to leave sufficient moisture in the goods to act as a 'cushion' against high temperatures"; "Drying capacities have been increased without sacrificing our beautiful blue-whites"; "Uniformity of finishes is more readily achieved"; "Parchmentizing of synthetics is prevented"; "A softer, more mellow hand is secured, especially on spun rayon and waffle cloths"; "Print cloth takes color better, more uniformly, and without color migration when a 5% moisture content is maintained"; "Close adherence to the correct moisture content improves the finish."

One of the most troublesome variables in your production line is eliminated by a Fielden Drimeter which replaces human guessing with a uniform control that is automatically held to 1% of the predetermined moisture content you set on the control. Drimeter assures a uniformity of finish from order to order, as well as savings in time and money.

Your operator simply sets the Fielden Drimeter to the desired moisture content for the fabric being processed and modern electronics take over to insure you a consistently uniform moisture content control to 1% of predetermined setting.

The human factor of misjudgment and error is completely eliminated. Because they are aware of the troubles



caused by bringing goods off a drying machine too damp, many experienced operators lean backward to be sure that the goods are "dry enough." As fabric with normal regain feels damp when hot, the goods come off the frame bone dry. This situation causes the dryer to run slower, thus decreasing production, adding to cost unnecessarily, and becoming detrimental to the finish. A setting of 5%, 6%, or 8% on the Fielden Drimeter will automatically increase your production, lower your cost, and produce uniformly fine quality goods.

Write today for descriptive, illustrated literature on the Fielden Drimeter and other Fielden automatic moisture controls.

Fielden
INSTRUMENT DIVISION

ROBERTSHAW-FULTON CONTROLS CO.
2920 North 4th Street • Philadelphia, Pa

What the TEXTILE MILLS are doing

near Saxon in a building which formerly housed Raycord, Inc.

South Pacific Textile Mills, 792 South Stanford St., Los Angeles, Calif., have installed additional equipment in their main divisions. **California Jersey Mills,** 817 Lord St., an associated interest, have plans for a similar expansion program.

Spring Grove Spinning Co., 99 Allen St., Woonsocket, R. I., has changed its name to **Sydney Worsted Co.**

Talon, Inc., Meadville, Pa., has a new plant under construction at Stanley, N. C., for manufacture of tapes and cords.

Indian Head Mills, Inc., 1407 Broadway, New York City, organized recently by interests identified with **Textron, Inc.,** has taken over the Textron mill at Nashua, N. H. Another mill at Cordova, Ala., known as Cordova division of Textron Southern, Inc., will be operated also by the new organization. J. E. Robinson is president of the new company.

Textron Southern, Inc., is working on expansion of Peerless Mills, Inc., Belton, S. C., for installation of about 480 new looms and auxiliary equipment for weaving of synthetic fabrics. The company is also building an addition to its plant at Williamston, S. C.

Sale Knitting Co., Martinsville, Va., has been purchased by **Henry J. Tully & Co.,** 340 Broadway, New York, N. Y., and will be taken over at once. Tully heretofore has been sales agent for Sale mill. Michael P. Tully is chairman of the board of the reorganized company.

Trigg Knit Hosiery Mill, Cadiz, Ky., recently organized, is specializing in manufacture of anklets.

A modernization program is in progress at **Wanskuck Co.,** Providence, R. I., which includes replacement of old machinery.

Cooperative Wholesale Establishment, P. O. Box 990, Colombo, Ceylon, has asked bids for construction of a cotton mill, including spinning weaving, and finishing units, with complete machinery and equipment for these divisions. Mill will have a rated output of 2500 lb per day.

CALCO *dyelines*

Advertisement
No. 31 of a series

PREPARED BY AMERICAN Cyanamid COMPANY / CALCO CHEMICAL DIVISION
DYESTUFF DEPARTMENT, Bound Brook, New Jersey
New York • Chicago • Boston • Philadelphia • Charlotte • Providence

Calco®

TAKE CORDUROY FOR INSTANCE—

Whatever your specific fastness requirements on corduroys, the wide range of Calco dyes in every class is more than adequate to meet your every need. If the demand is for light fastness or tub fastness only, the ever-increasing Calcodur* line of sunfast direct colors or the complete line of

Calcogene* sulfur colors is available. To supplement the sulfur colors where tub fastness only is necessary, the after-treated direct colors in the Calco line are very useful. Many of the above colors are dischargeable and are widely used as ground shades for discharged prints.

If more enduring colors of all around fastness are called for, as in boys' wear, sportswear, and other quality fabrics, a full range of shades can be obtained with the extensive line of Calco finely dispersed vat colors, suitable for all methods of application. Some of these dyes are exclusive with Calco and are in wide use. Complementing the vats for scarlet, maroon and rust shades are the Calco Naphthosols®, some of which are in the handy solution form.

Especially recommended among our vat colors are:

Calcosol* Fast Yellow Paste
Calcoloid* Pink FFD Double Powder
Calcosol Violet BN Ex. Paste
Calcosol Navy Blue Paste
Calcoloid Blue BLNS Double Paste
Calcoloid Brown R Double Powder
Calcosol Brown BR Paste
Calcoloid Copper Brown Double Powder
Calcosol Jade Green N Supra Double Paste
Calcosol Olive Green BN Double Paste
Calcosol Olive T Paste
Calcosol Gray 2G Double Paste
Calcoloid Black BNS Double Paste

Whether your dyeing method is all jig, pad pigment, jig reduction or the continuous method, Calco technicians are highly qualified to assist or advise you. Ask your Calco representative for full particulars or samples.

NEW USES FOR AN OLD-TIMER

Calcomine* Sky Blue FF Ex. Conc. was always a favorite dye for brightness on cotton before the synthetic fibers made their appearance. With the advent of viscose rayon it has retained its popularity because of its equally good dyeing properties on that fiber. It has good leveling properties, excellent money value, extreme brightness, and fastness properties sufficient for many fabrics requiring average fastness.

When acetate and nylon came into the picture, Calcomine Sky Blue FF Ex. Conc. again proved its worth because it did not dye or stain these fibers or wool, making it possible to have good control of shade in blends of cotton or viscose with acetate, nylon or wool.

It also finds a field of application in printing of cotton or viscose where it is used to dye ground shades for discharge whites. It produces clear, bright medium and pastel ground shades with satisfactory properties.

*Trade-mark

Where Economy Counts

Work clothes and children's low-cost, short-lived play clothes are expendable. For this reason, dyers find Calcogene* (sulfur) dyes possess quite adequate fastness for the purpose at very much less cost than vats.

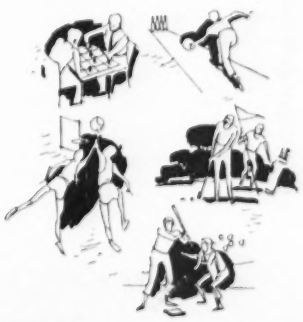
They are able to keep a full range of shades within the required cost limit by using:

Calcosols (Vats) for light and medium shades
Calcogenes (Sulfurs) for brown, black and navy shades
Calco Naphthosols for red and wine shades

For the Textile Bookshelf

Application of Dyes to New Synthetic Fibers (Calco Technical Bulletin No. 826). A carefully compiled record of existing data on the new synthetic fibers. Dyeing methods for the coloring of the new synthetic fibers and fastness properties to look for are covered in this paper.

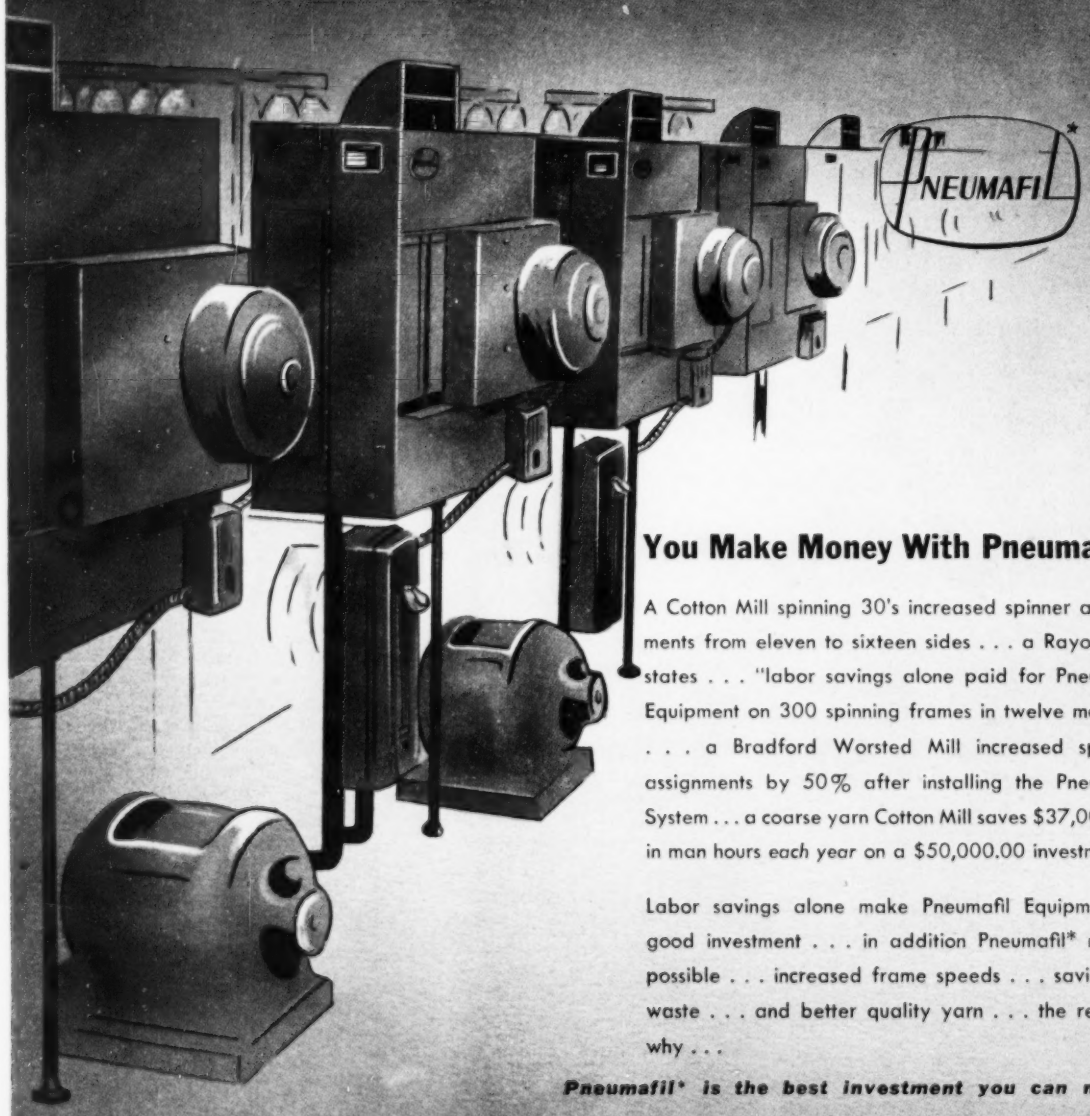
Identification of Synthetic Fibers by Microscopical and Dye Staining Techniques (Calco Technical Bulletin No. 831). Review of stain and microscopical identification tests which have been found very useful in determining the fiber composition of materials being colored. This is often difficult because of the many combinations which are possible and because of the newness of many of the fibers.



1650 employees participate in the Calco activities program embracing 21 different sports, games and hobbies.

Pneumafil* Means...

More Spinning With Less Spending



You Make Money With Pneumafil*

A Cotton Mill spinning 30's increased spinner assignments from eleven to sixteen sides . . . a Rayon Mill states . . . "labor savings alone paid for Pneumafil Equipment on 300 spinning frames in twelve months" . . . a Bradford Worsted Mill increased spinner assignments by 50% after installing the Pneumafil System . . . a coarse yarn Cotton Mill saves $37,000.00 in man hours *each year* on a $50,000.00 investment.

Labor savings alone make Pneumafil Equipment a good investment . . . in addition Pneumafil* makes possible . . . increased frame speeds . . . savings in waste . . . and better quality yarn . . . the reasons why . . .

Pneumafil* is the best investment you can make.

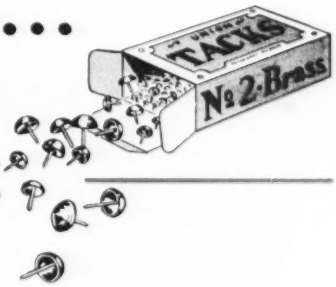
*Trade Mark

PNEUMAFIL CORPORATION • Charlotte 8, North Carolina

Sales Offices: Needham Hts., Mass.—Atlanta

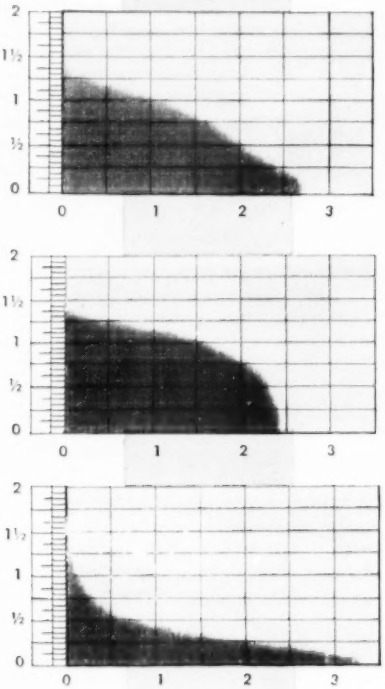
When you get down to brass tacks . . .

here's what a comber should do!



It should:

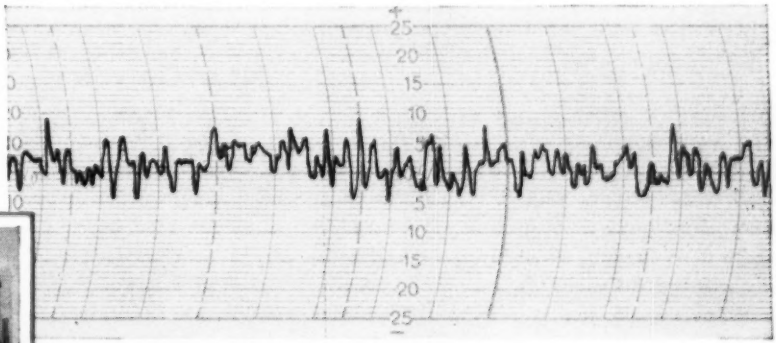
- Produce high quality sliver with low variation.
- Reduce neps to the lowest possible amount. The ratio will vary from 3:1 to 6:1 depending on the staple and the amount of noil.
- Remove practically all of the short fibers and few or none of the long.
- Produce at a high rate compatible with space required, investment costs, and total combing expense.
- Operate with a low productive cost per pound.
- Be easy to adjust, and hold the settings between overhauls.
- Run at high efficiency, requiring minimum expense to maintain, lubricate, and repair.
- Function so simply and smoothly that operator efficiency is high.



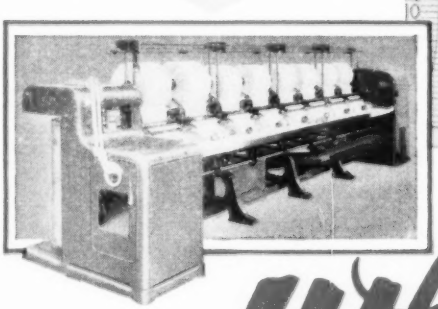
The above fiber arrays show the quality of work done by the Whitin "J" Comber. At top, ribbon lap; center, combed sliver; at bottom, noil. Note that practically all of the short fibers have been removed and only a very few long fibers combed out.

. . . and that's just what the WHITIN model "J" does!

For all-round efficiency, versatility, and superiority of design, it has been acclaimed in both the United States and Europe. Thoroughly tested in mill installations ranging from a few to as many as 200, the Model "J" Comber is recognized as the finest comber yet developed.



Section from Uster graph made in mill test, Whitin "J" Comber sliver. The stock is 55 grain Pima. Test data: average variation, 17.6 per cent; maximum variation, 30 per cent.

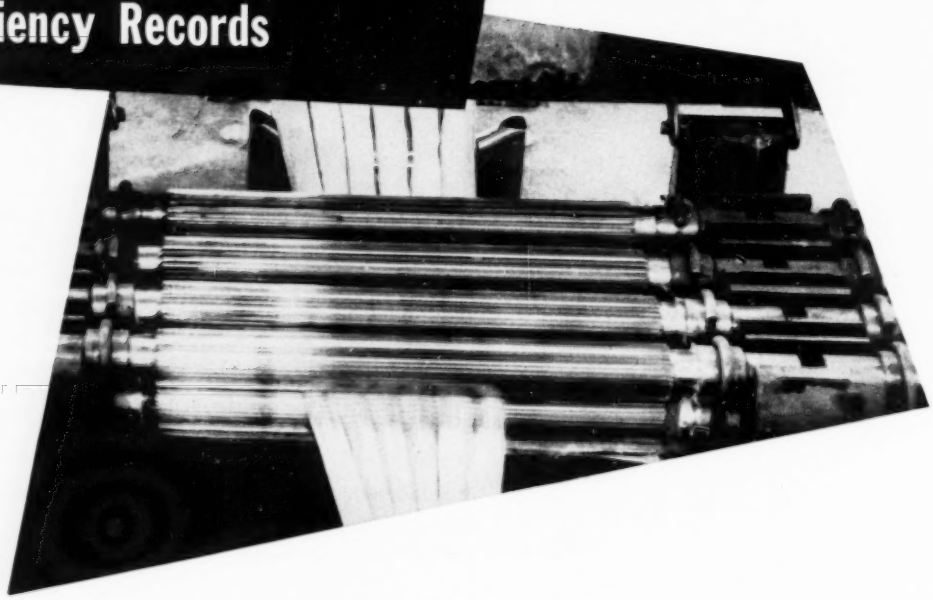


Whitin MACHINE WORKS

WHITINSVILLE, MASSACHUSETTS

CHARLOTTE, N. C. • ATLANTA, GA. • SPARTANBURG, N. C. • DEXTER, ME.

Ideal High Speed Ball Bearing Drawing Rolls* Shatter All Previous Efficiency Records



Three Ideal units will outproduce five of the best types previously known . . . and produce better yarn as well.

A survey among operators of many hundreds of Ideal units shows an average reduction of 26.9% in variation of drawing sliver, 20.5% in yarn numbers, and a 7.4% improvement in breaking strength. In many cases Ideal units were credited with more than doubling the production per frame. These carefully kept records also showed a reduction of 7.5% in ends down in roving and 27.5% in spinning.

This survey showed such an improvement in performance, efficiency, and yarn quality that old standards can no longer be used. Ideal Drawing Rolls save on original cost, labor, floor space, and maintenance. Don't replace your present drawing rolls until you have investigated the great advantages of Ideal High Speed Drawing Rolls. Write or wire for full information.

Ideal Industries, Inc.
Bessemer City, N. C.

*patented

DOW CORNING

Silicone Notes

ON FABRIC TREATMENTS

Why is DeCetex 104 Superdurable?

Recent investigations* prove that a DeCetex treatment completely envelops each individual fiber in a tightly bonded, flexible silicone surface. To establish this fact, a DeCetex-treated acetate suiting fabric was soaked for 24 hours in acetone. Photomicrographs were then made of the thin-walled silicone tubes that remained after the acetate fibers had been dissolved. Further enlargement of the inner surfaces of silicone tubes even showed impressions due to the characteristic surface irregularities of the fiber.

High resistance to oxidation, to temperature extremes and to a variety of chemicals is inherent in all silicone products. That's why these water repellent silicone tubes withstand repeated exposure to cleaning agents.

As further proof of the exceptional durability of DeCetex 104 as a water repellent treatment for fabrics we report spray-rating tests on four commercially treated fabrics subjected to three dry cleanings. These fabrics were cleaned with a standard load in a 30 x 30 Stoddard solvent washer using a dry cleaning soap and pre-spotter solution. The load was run with the soap and pre-spotter solution for 25 minutes without filter circulation. Samples which were not rinsed were removed, extracted and dried. The balance of the load was then rinsed for 20 minutes in fresh solvent with filter circulation. Samples were extracted and dried at 145°F for 25 minutes before conditioning and testing.

Effect of Commercial Dry Cleaning on DeCetex-treated Fabrics

Treatment	Acetate Spun Fill Filament Warp	50/50 Acetate and Spun Rayon	Acetate Spun Fabric	Acetate Filament Warp and Fill
	Spray Ratings			
None	100	100	100	100
1 Cleaning—no rinse	80	90	80	90
1 Cleaning & rinse	90	90	80	90
3 Cleaning & rinses	80	80	80	80

Resistance of DeCetex treated fabrics to laundering was also tested. Test samples were laundered in a reversing washwheel with 0.1% soap in water at 120°F for 40 minutes followed by 5 rinses at 100°F.

Laundering Durability of 50/50 Rayon Acetate Fabrics Commercial Treated with DeCetex 104

Sample	Percent Silicone Pickup	Spray Ratings Original	Wash 1	Wash 2	Wash 3
1	.86	100	90	90	90
2	1.10	100	90	90	90
3	1.00	100	90	90	90
4	1.20	100	90	100	90

In addition to superdurable water repellency, DeCetex imparts several other important characteristics to the fabric, including a desirable hand and excellent resistance to water-borne stains. DeCetex-treated fabrics seldom show mark-off as a result of the finish. They have superior resistance to wear; improved sewability, increased tear strength, greater stability and wrinkle resistance.

DeCetex is easily applied, dried and cured with conventional equipment. No corrosive chemicals are involved; no washing or neutralizing is required and treated fabrics remain odorless even after aging. For more information or for technical assistance, call our nearest branch office or write for Data Sheet BL-5.

*Fortess et al, Resin Finishing of Acetate Fabrics, Atlantic City meeting, A.C.S. Sept. 1952.

DOW CORNING SILICONES

DOW CORNING CORPORATION MIDLAND, MICHIGAN

Atlanta
Chicago
Cleveland
Dallas
Los Angeles
New York
Washington, D.C.

In Canada: Fiberglas Canada Ltd., Toronto

Great Britain: Midland Silicones Ltd., London

FOAM'S A THIEF

with DOW CORNING ANTIFOAM A

Use productive capacity now wasted on foam; cut processing time with Dow Corning Antifoam A, the silicone defoamer that works at concentrations in the range of:

3 ppm ◊ in recirculating cooling brines
2.5 ppm ◊ in bottling soft drinks
2 ppm ◊ in varnish cooking
200 ppm ◊ in textile resin backings
0.4 ppm ◊ in steel pickling baths

◊ Effective at remarkably low concentrations in a wide variety of foamers, Dow Corning Antifoam A compound is harmless physiologically. It can be used as received, mixed with one of the foaming ingredients or dispersed in a solvent for industrial applications.

◊ Equally versatile and more easily dispersed, Dow Corning Antifoam AF Emulsion is a water dilutable defoamer containing 30% Antifoam A. Originally designed for use in the food processing industries, Dow Corning Antifoam AF Emulsion has a wide field of industrial usefulness.

see for yourself!

mail coupon TODAY for **free sample**

DOW CORNING SILICONES

Dow Corning Corporation
Midland, Mich., Dept. BL-5A.

Please send me data and a free sample of—

☐ Dow Corning Antifoam A or
☐ Dow Corning Antifoam AF Emulsion

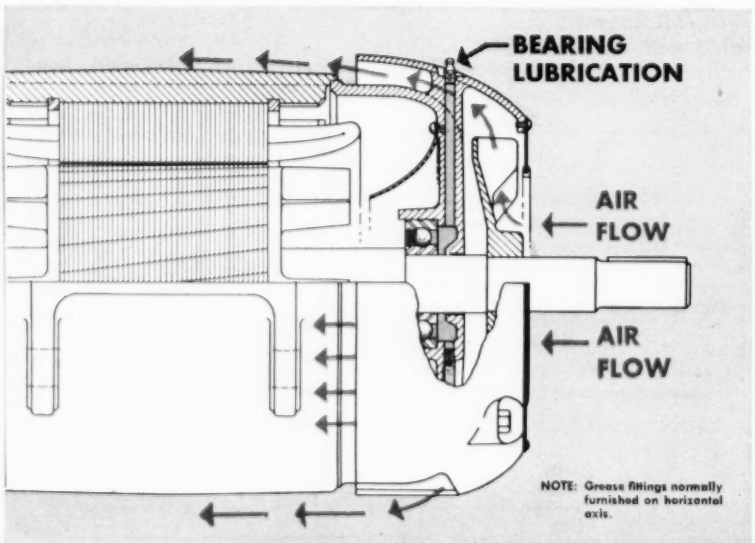
NAME_____

COMPANY_____

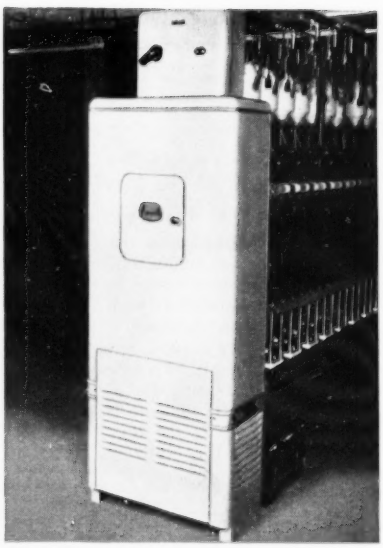
ADDRESS_____

CITY_____ ZONE____ STATE_____

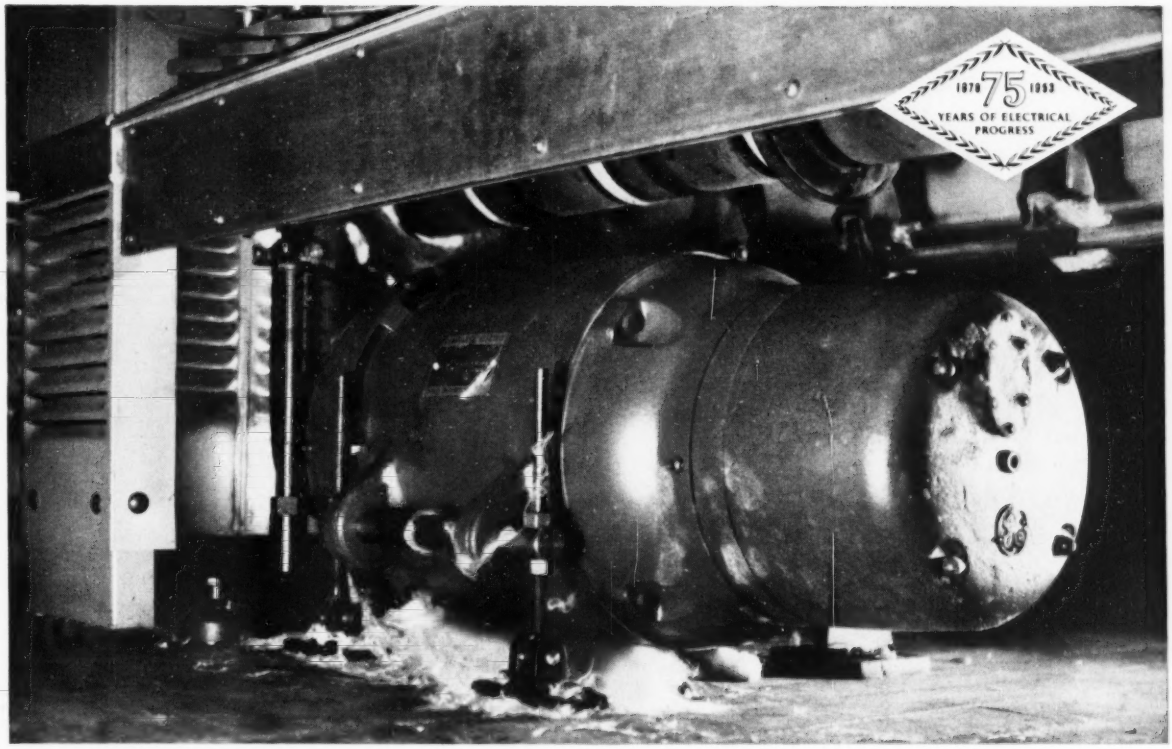
SG-1 Gwaltney spinning frames



MAINTENANCE TIME IS REDUCED because positive lint-expulsion keeps motor clean, large grease reservoirs and convenient pressure-relief fittings make lubrication infrequent and easy—without disassembly.



STREAMLINED MOTOR CONTROL is compact, conveniently-located, designed especially for the SG-1 frame.



AISLE SPACE IS SAVED because compact, totally-enclosed, fan-cooled G-E motor is mounted beneath the SG-1 spinning frame. Non-clogging design of external cooling fan and fan housing allows free passage of lint-laden air.

driven by new-type G-E motors

Two motor designs—fan- or water-cooled—meet all mill needs

WATER-COOLED DESIGN uses large-diameter Saran tubing wound directly around coil ends—assures maximum cooling efficiency.

Saco-Lowell's new SG-1 Gwaltney spinning frame—the latest in modern textile machinery—required equally new motor designs.

First, Saco-Lowell engineers drew up complete drive requirements. Then they worked with the General Electric design and application engineers who developed the two new types of SG-1 spinning frame motors: one, totally-enclosed, fan-cooled, non-clogging; the other, totally-enclosed and water-cooled.

BOTH MOTORS ARE COMPACT, EFFICIENT, DEPENDABLE

1. They minimize cleaning problems. Both motors are protected against entry of lint.
2. They save aisle space. Both are compactly designed to fit under the spinning frame.
3. They promote even spinning room temperatures.
4. They take varying spinning loads in stride.
5. They simplify maintenance. Grease fittings are conveniently located on sides of motor. Relubrication is easy—and infrequent.

Your G-E apparatus sales representative can give you further details. General Electric Co., Schenectady, New York 654-28

Engineered Electrical Systems for Textile Mills

GENERAL ELECTRIC

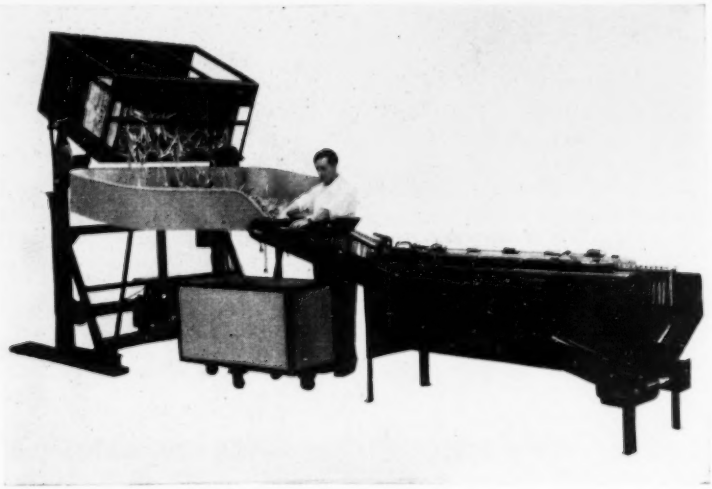
There's

NEW ECONOMY

for cotton mills in

THE NEW TYPE L

Bobbin Cleaning Machine



The modern Type L, originally designed for synthetic and silk fibers, has surpassed all expectations for cleaning cotton yarns. Cotton mills using the new Type L report equal or better production from this machine than any other quill cleaning equipment previously used.

Simplified design reduces down time and maintenance costs.

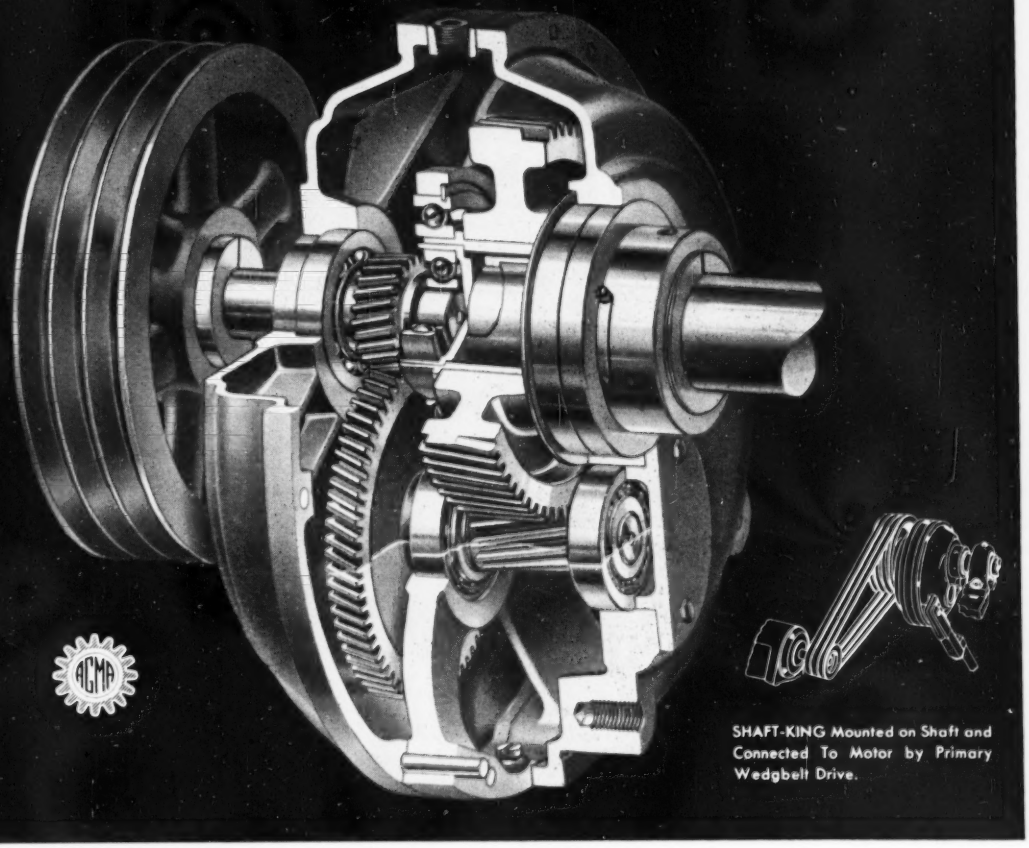
No bobbin damage at the cleaning operation results in lower bobbin replacement and better weaving. Seconds are reduced because bobbin damage caused by other cleaning machines or methods is eliminated.

Terrell engineers have been solving bobbin cleaning and handling problems for many years. Let us show you how the above savings can be effected.

THE TERRELL MACHINE COMPANY, Inc.

Charlotte, North Carolina

NEW! SHAFT-KING Speed Reduction Drive



SHAFT-KING Mounted on Shaft and Connected To Motor by Primary Wedgbelt Drive.

Cut-Away View of SHAFT-KING, a 20 to 1 Ratio Shaft-Mounted Speed Reducer.

Eight Reasons why SHAFT-KING Is Your Best Buy For Power At The Speed You Need:

1. Durable: Rigid housing, flame-hardened alloy-steel gearing, anti-friction bearings, extra oil capacity—for long, trouble-free life.

2. Efficient: Helical gearing, exclusive anti-friction oil-sealing system—for maximum efficiency—indefinitely.

3. Patented Concentric-Shaft Design: Puts shaft seals well above highest oil level—provides instantaneous overload protection when equipped with Torque-Arm Overload Release.

4. Leakproof: Anti-friction oil sealing system keeps air in—dirt out.

5. Patented tapered bushing adapts the SHAFT-KING to the driven machine shaft. Only standard shaft extensions are needed.

6. Housing is smooth, compact: Unit is shaft-mounted—requires no bulky foundations or supports.

7. Quick, Easy Speed Changes: To change speed simply change motor sheave of primary drive—or use American Adjustable-Speed Sheaves.

8. Readily Available: All components of American SHAFT-KING Reduction Drives are stock items—everywhere.

Clip and mail the coupon today for your copy of the new SHAFT-KING Catalog; the name of your American Distributor; or engineering help.

At the PROFIT End of the Machine

Other products: Wedg-Tite Sheaves Wedgbelts • Adjustable-Speed Drives • Backstops Econ-O-Matic Motor Bases • Steel Conveyor Pulleys • Hi-Torque Motor Pulleys • Solid and Split Shaft Collars • Steel Split Pulleys

POWER TRANSMISSION BY AMERICAN PULLEY COMPANY

The American Pulley Company
4222 Wissahickon Ave., Philadelphia 29, Pennsylvania

Gentlemen:

- ☐ Please send me a copy of the new SHAFT-KING Catalog.
- ☐ Send me the name of your local distributor.
- ☐ We need help on a slow speed drive problem.

Name _____
Firm name _____
Address _____
City _____ Zone _____ State _____

NEW!

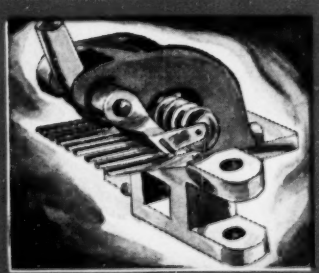
EXCLUSIVE *HUNTER*

VapoJet

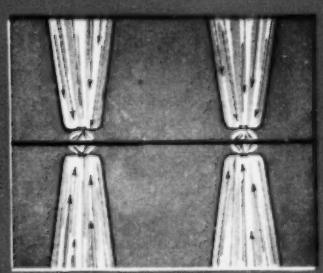
FASTEST, MOST EFFICIENT DRYER EVER MADE!

Patented, superheated steam process boosts drying speeds to limits never thought possible . . .

and does a better job!



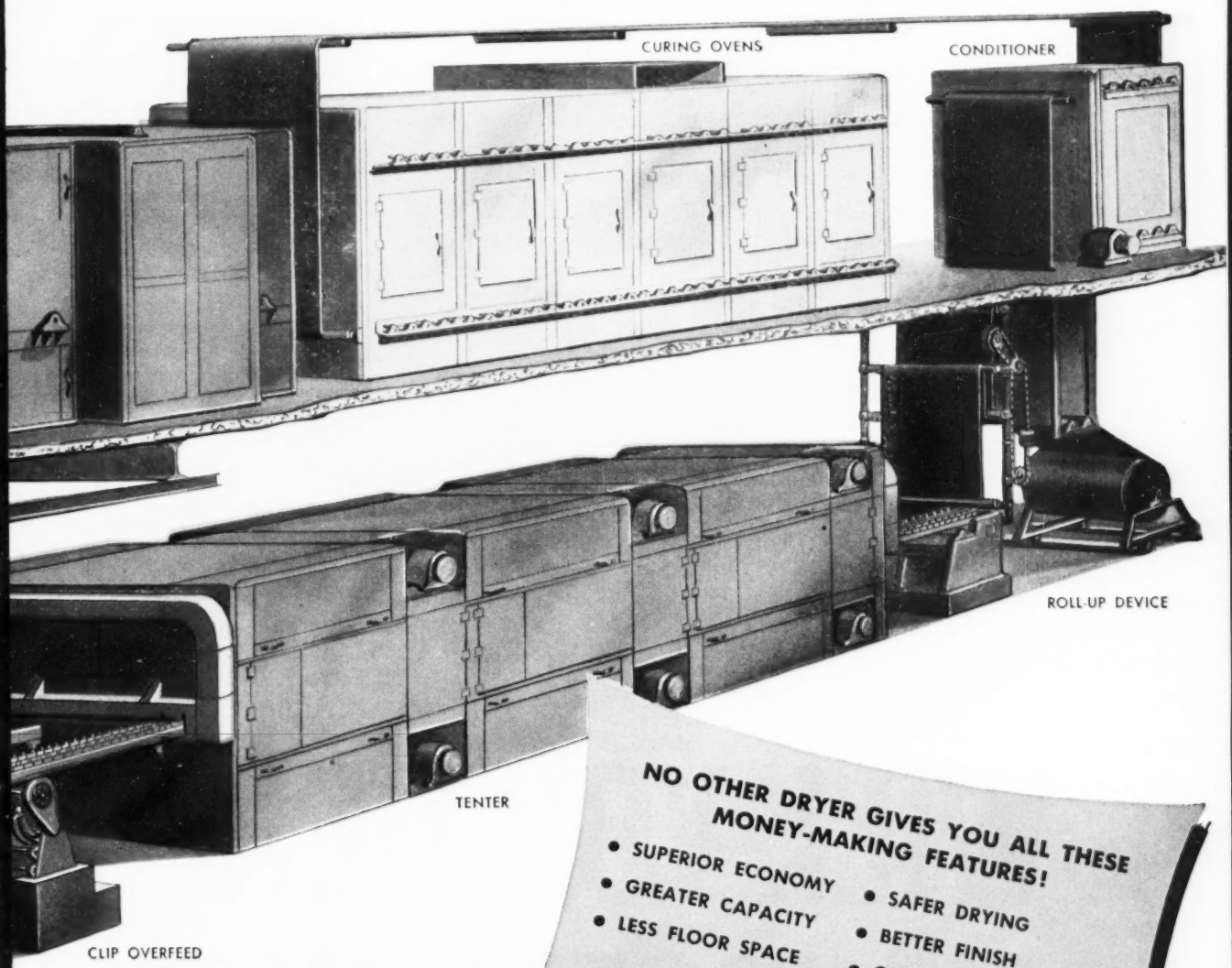
PATENTED CLIPS ingeniously designed to overfeed as much as 20% on a wide variety of fabrics with gentle firmness and accuracy. Comb-type lower plates also permit uniform drying of the selvedges. The only clip which can be overfed.



SUPERHEATED STEAM vapor jets at a velocity of a mile a minute impinge on cloth simultaneously from above and below. Controlled fabric drying, at vaporization temperature, is most efficient method yet developed . . . undesirable fabric overdrying is eliminated.

JAMES

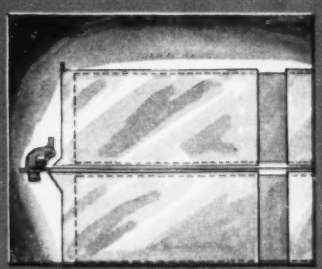
This illustration shows three Vapo Jet Machines (two Predryers and a 3-Section Overfeed Clip Tenter) in a Hunter Continuous Cloth Drying and Resin Curing Range installation at Cliffside Dyeing Corporation, Paterson, New Jersey.



NO OTHER DRYER GIVES YOU ALL THESE MONEY-MAKING FEATURES!

- SUPERIOR ECONOMY
- GREATER CAPACITY
- LESS FLOOR SPACE
- SAFER DRYING
- BETTER FINISH
- CONTROLLED SHRINKAGE

DUNGLER SYSTEM



EXCLUSIVE PATENTED TELESCOPIC NOZZLES make it possible to direct the high velocity jets of vapor evenly over the cloth at exceedingly close range. These nozzles automatically adjust to changes in febric widths.

TIME AND SPEED. The many special, patented design features of the Vapo Jet make it possible to obtain more efficient evaporation than can be accomplished through any other type of air drying system. This high evaporation capacity saves space, time and money.

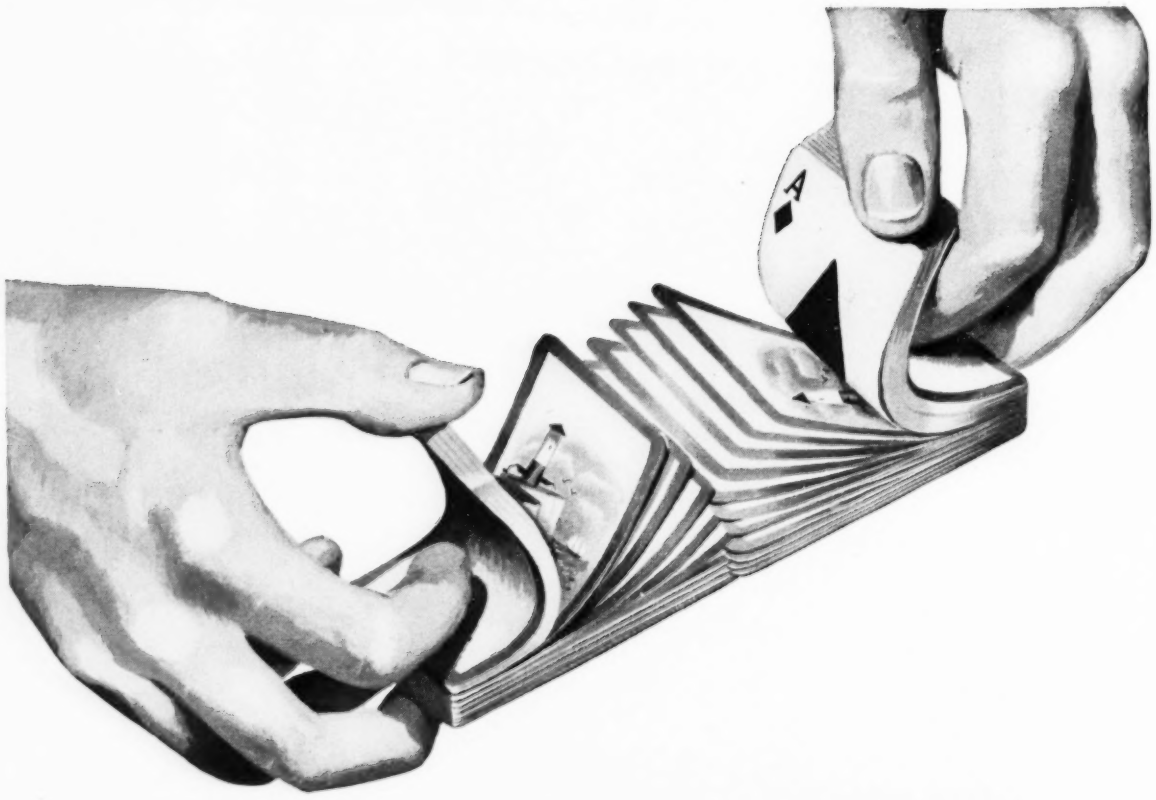
BETTER FINISH. Processes all types of fabrics from the most delicate rayon crepes to heavy worsteds without any great or time-consuming adjustments. Controlled drying results in fabric finishes that meet the highest standards for both appearance and handle.

HUNTER MACHINE CO.

BUILT BY HUNTER
...IT'S DEPENDABLE

JAMES HUNTER MACHINE CO. Hunter NORTH ADAMS MASS.

NORTH ADAMS, MASSACHUSETTS • FOUNDED 1847



WILL YOU DEAL YOURSELF IN?

NATIONWIDE CELANESE ADVERTISING FOR CELAPERM* ACETATE YARN ROLLS UP VOLUME FOR INDIVIDUAL MAKERS. WILL YOU DEAL YOURSELF IN?

Without question, Celaperm—Celanese' *perfected* solution-dyed acetate yarn—offers unparalleled styling opportunities and mill efficiencies.

For example—with Celaperm you enjoy color fidelity, no matter how large an order you place. You can achieve plain or iridescent effects with Celaperm. You can by-pass difficult dyeing operations and strikingly combine Celaperm with black or white yarns. You can combine Celaperm with two other fibers, that can be cross-dyed for brilliant fashion. Indeed, with Celaperm you can develop *loom-finished* fabrics.

You can do all these things with Celaperm—but what do they add up to? In a word—*promotion*—the most significant color promotion in fabric and fashion today.

That is why Celanese is spreading the good word—CELAPERM—through color pages and spreads in the nation's leading magazines: Life, Good Housekeeping, Vogue and Harper's Bazaar, House & Garden, House Beautiful, Mademoiselle—advertising backed by a great name—*Celanese*—synonymous with textile leadership. That is why Celanese advertising is conceived in terms of merchandise and store promotions that will not only drive home our Celaperm name—but *move* home your Celaperm goods.

Here is an exciting opportunity for alert mills (*and* makers *and* merchants) who believe that fashion moves forward with color beauty that lasts for the life of the fabric—and that sales thrust ahead with dramatic *merchandise* advertising. Here is *your* opportunity to work with Celanese and *Celaperm* and so create a better future for all.

Will you count yourself in? Write: Merchandising Director, Celanese Corporation, 180 Madison Avenue, New York 16, N. Y. and see how you can participate in the big national promotions now being planned.

*Reg. U. S. Pat. Off.

CELAPERM*

Celanese*

ACETATE YARN WITH PERFECTED "SEALED-IN" COLOR

MEMO TO COST-CONSCIOUS PUMP BUYERS:

The centrifugal pump to handle your job to satisfaction and at lowest power and upkeep cost is shown or described on this page.

"Buffalo"

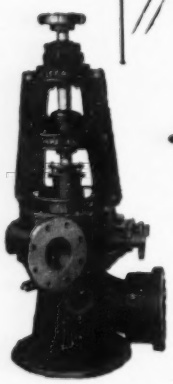
Pumps are not built to sell cheaply, but to operate cheaply. That is where pump savings are made. May we suggest that you and your staff write us for engineering bulletins on any pumps you need. Then look into the long-life features like oversize "Buffalo" bearings, shafts and stuffing boxes. See the accessibility of all parts, the high efficiency impeller design. You'll see why "Buffalo" Pumps save money!

BUFFALO PUMPS, INC.
175 Mortimer St. BUFFALO, NEW YORK
Subsidiary of Buffalo Forge Co. Canada Pumps, Ltd., Kitchener, Ont.

...and DID YOU KNOW that you can get a "Buffalo" Fan of the exact size and type you want — for ventilation, blowing, exhausting, draft, air conditioning supply. "Buffalo" has been First For Fans for 75 years. You're safe in specifying "Buffalo" for your air handling needs!

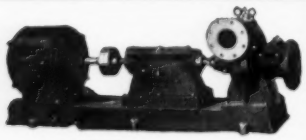
BUFFALO FORGE COMPANY
175 Mortimer St. BUFFALO, N.Y.
Publishers of "Fan Engineering" Handbook
Canadian Blower & Forge Co., Ltd., Kitchener, Ont.
Sales Representatives in all Principal Cities

"Buffalo" PUMPS

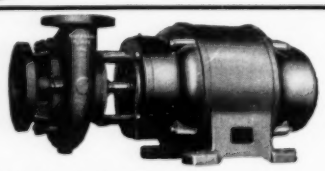


NON-CLOGGING SEWAGE PUMPS
For trouble-free sludge circulation, agitation and removal. Vertical or horizontal models. Request Bulletin 964-G.

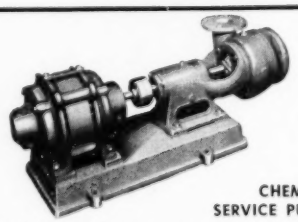
SUMP PUMPS
Complete units ready to install. No stuffing boxes required. Ball bearing thrust and enclosed shaft.
Bulletin 963-F.



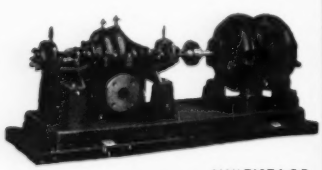
PAPER STOCK PUMPS
A pump for every liquid, consistency and head. Non-clogging enclosed impellers retain initial efficiency. Mill-proven for many years. Bulletin 953.



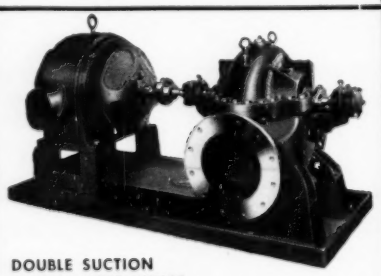
CLOSE-COUPLED PUMPS FOR ALLOY CONSTRUCTION
Compact, sturdy, easily installed. Shafts in permanent alignment. Bulletin 975.



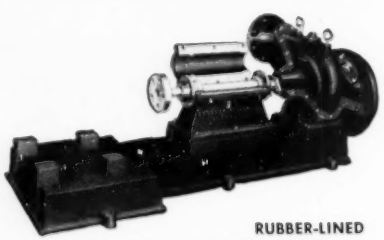
CHEMICAL SERVICE PUMPS
Suitable for construction in most machineable alloys. Full ball bearing, single suction. Bulletin 982.



MULTISTAGE CLEAR WATER PUMPS
for pressures up to 500 psi. Rugged, efficient, popular boiler feed pumps. Bulletin 980. "Buffalo" also manufactures automatic condensate pump and receiver units.



DOUBLE SUCTION CLEAR WATER PUMPS
are hydraulically balanced and of finest obtainable construction. Bulletin 955.



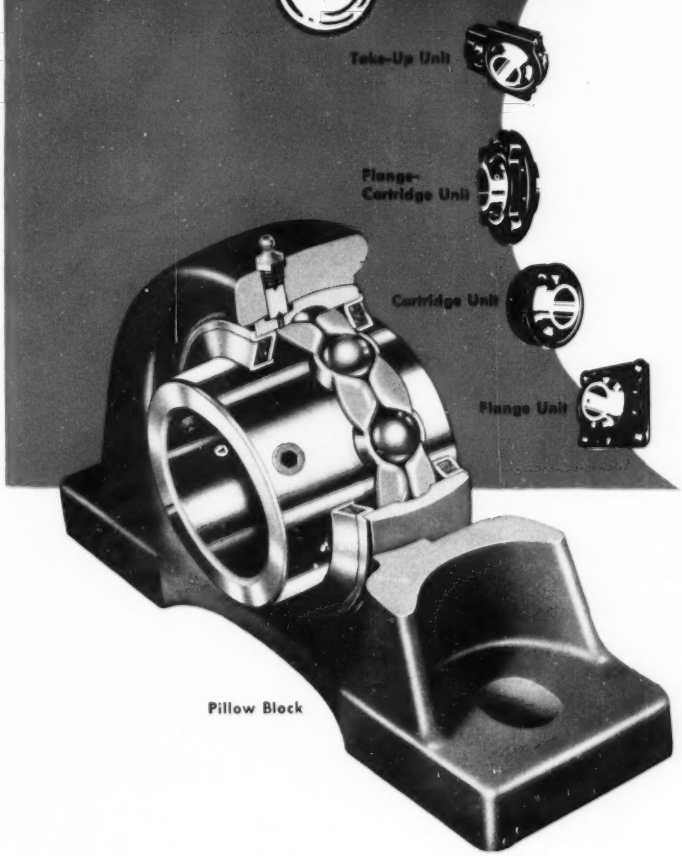
RUBBER-LINED
"Buffalo" Rubber-Lined Pumps handle a wide variety of acids, caustics and liquids containing abrasives. All pump parts contacting liquid are covered with the proper grade of rubber. Bulletin 953.

YOUR LOGICAL CHOICE

Wherever Bearing Performance and Cost are Important

SEALMASTER

BALL BEARING UNITS



For ALL These Reasons

1. **PERMANENTLY SEALED**
   to exclude dirt and retain proper amount of lubricant.
2. **SELF-ALIGNING**
   in any direction without seal distortion.
3. **PRE-LUBRICATED**
   with the proper amount of lubricant—for long service.
4. **ZONE HARDENING**
   of ball path section of inner race ring, with extended part of race left soft for better race-to-shaft locking.
5. **NO HOUSING WEAR**
   —patented locking pin and dimple prevent rotation of outer race in housing.
6. **FLOATING BALL RETAINER**
   traps lubricant, prevents churning.

To the thoughtful engineer or operating executive, *each* of these SEALMASTER features is a convincing reason for choosing SEALMASTER Ball Bearing Units. *Together*, this exclusive combination of basic advantages offers sound assurance of top performance *under all conditions*. Write now for your copy of Catalog 845—complete data on the broad SEALMASTER line.

SEALMASTER BEARINGS

A DIVISION OF STEPHENS-ADAMSON MFG. COMPANY • 74 RIDGEWAY AVENUE, AURORA, ILLINOIS

FACTORY REPRESENTATIVES AND DEALERS IN ALL PRINCIPAL CITIES

For better Warp Sizing ...Finishing...Printing

OK BRAND

TEXTILE STARCHES

• Always uniform! • Tailor-made for your requirements! • Always dependable!

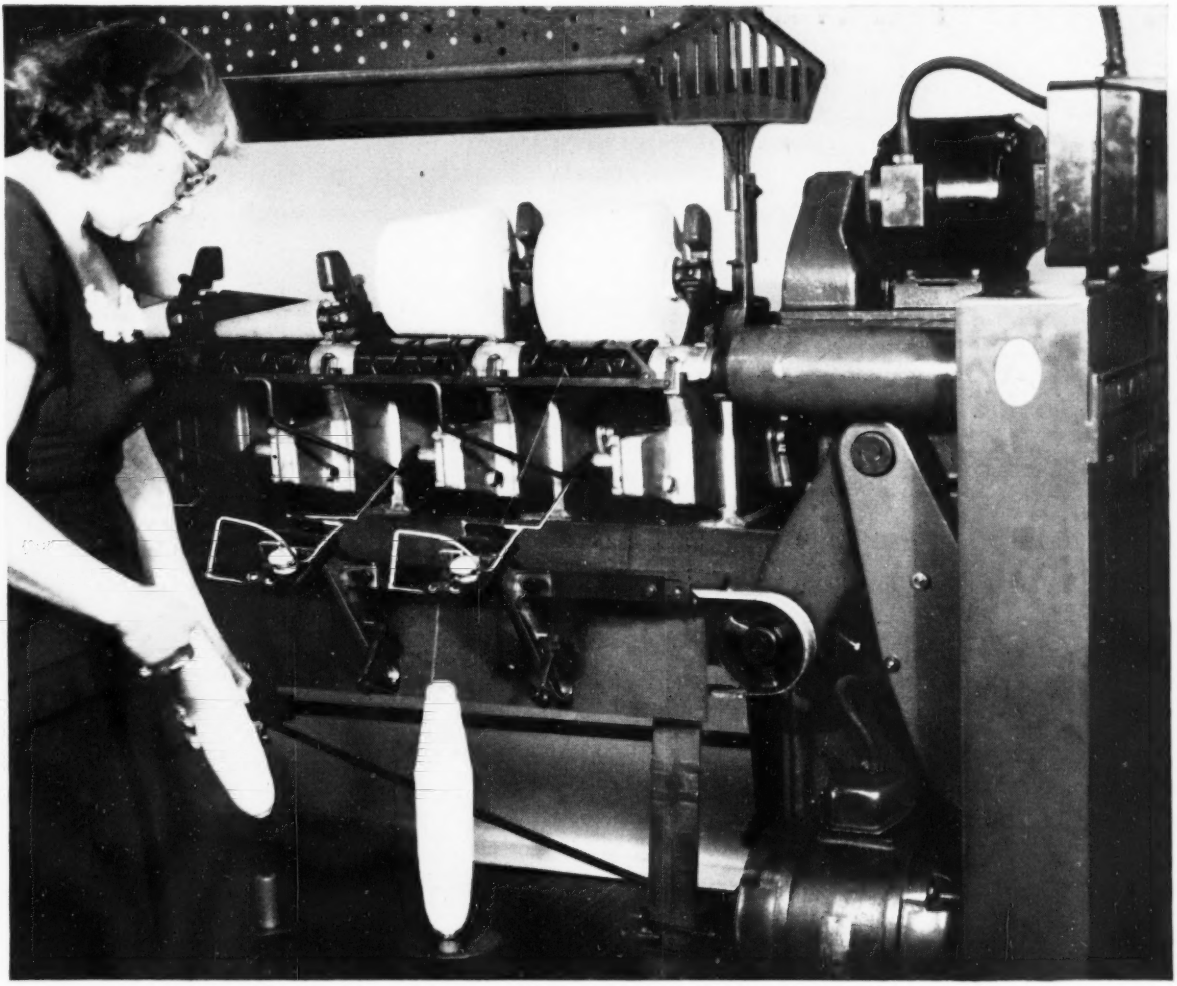
FREE TECHNICAL SERVICE!

Many expert textile men are members of the permanent technical staff of Hubinger's famous laboratories. You are invited to consult these experts on any production problem involving the use of starch—without cost or obligation on your part.

...the Stamp of Quality!

THE HUBINGER CO. (EST. 1881), KEOKUK, IOWA

Branch offices: Boston • New York • Charlotte • Chicago • Los Angeles



LARGE SPINNING PACKAGES reduce winding cost

Lower winding cost

makes Roto-Coner® Winder the ideal machine for mills using large spinning packages

Any mill using large spinning packages will find it makes great savings by winding on Roto-Coners.

The lower handling time per pound resulting from the longer yarn supply . . . plus the low initial cost per spindle . . . plus the low maintenance cost . . . makes this manually-operated winder your best buy.

So the advent of the large spinning frame package proves again the versatility of the Roto-Coner . . . capable of winding any type of open-wound package with the ideal combination of quality and economy.

Clean, quiet, easy to operate, the Universal Roto-Coner Winder assures high production at low cost in drum-winding cotton, spun nylon, spun rayon, wool, worsted or blends.

For complete information, write us direct.

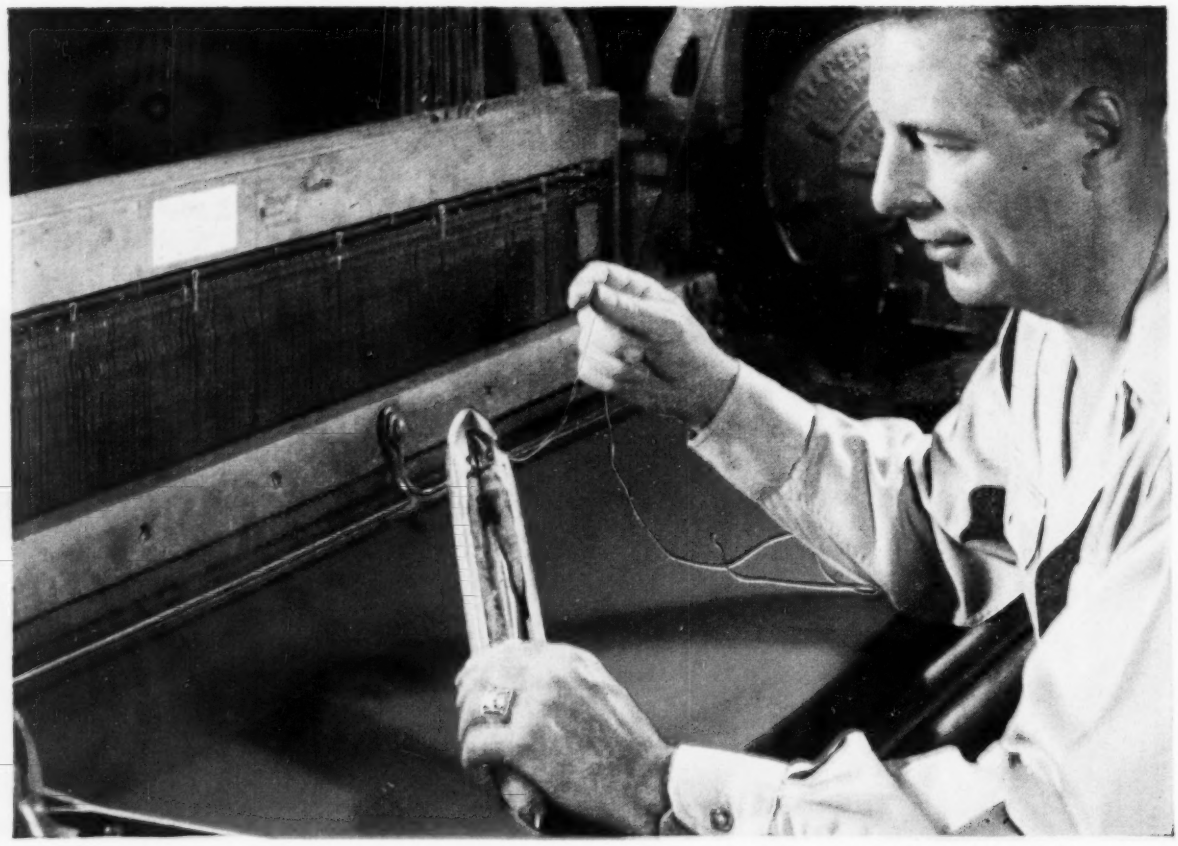
UNIVERSAL WINDING COMPANY

P. O. BOX 1605, PROVIDENCE 1, R. I.

Boston, Philadelphia, Utica, Charlotte, Atlanta, Chicago, Los Angeles; Montreal, Hamilton, Canada; Manchester, England; Paris, France; Basle, Switzerland

Agents in every principal textile center throughout the world

Winding and Twisting Machinery for Natural and Synthetic Yarns



(Photo courtesy of Tennessee Eastman Company)

Loom-finished fabrics? Durable size!

To avoid water-spotting . . . use new STYMER LF

Today beauty meets economy right on the loom! By weaving solution-dyed acetate yarns into the new "ready-for-market" fabrics, mills can now effect important processing economies *and* give the consumer a product that is attractive, color-fast and easy to maintain.

With loom-finishing, however, appeared the need for a *durable size*—one which would lick the problems raised by leaving a water-soluble agent in the finished fabric—and Monsanto developed Stymer LF to meet this need. Sizing with Stymer LF makes it possible to produce loom-finished fabrics that *do not water-spot*—goods with a crisp, marketable hand that will not become raggy after dry cleaning.

These qualities make Stymer LF, for loom-finishing, a worthy companion to Stymer S, used industry-wide for conventional acetate sizing. For complete details on how Stymer LF will enable you to take *full advantage* of the loom-finishing process, get in touch with:

MONSANTO CHEMICAL COMPANY, Textile Chemicals Department, Boston 49, Mass. Stymer: Reg. U.S. Pat. Off.

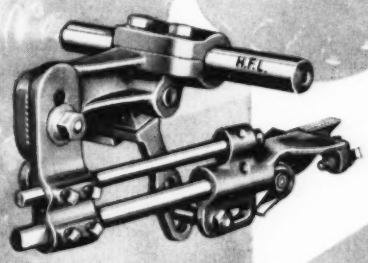
MONSANTO®

SERVING INDUSTRY . . . WHICH SERVES MANKIND

To replace "STAFFORD" type THREAD CUTTER
on E, K, L, O, X, XD, XK and other models

here's another item that keeps

LIVERMORE
in the LIMELIGHT



it's NEW *

. . . of simple design and construction

no more "DRAG INS"

when you install this

HFL IMPROVED THREAD CUTTER

1. **SHUTTLE-EYE ACTION**
   It cuts and holds filling *with a tight grip* at the SHUTTLE EYE!
2. **POSITIVE IN OPENING AND CLOSING**
   Never fails to operate . . . and *will not open if rebound occurs.*
3. **ALL CASTINGS MALLEABLE IRON**
   Longer service provided by overcoming parts breakage.

Can also replace "ROPER" type thread cutter by removing the present "gooseneck" and stand, and installing the HFL Improved Shuttle Feeler, Bracket, Tip, Latch Depressor and Front Box Plate.

Send for descriptive literature

HFL IMPROVED LOOM PARTS
insure minimum cost per yard of production.

HFL
IMPROVED LOOM PARTS

H. F. LIVERMORE CORPORATION

ESTABLISHED 1887

EXECUTIVE OFFICES & PLANT
BOSTON 34, MASS.

SOUTHERN DIVISION
GREENVILLE, S. C.

* Patent applied for

How Quill Winders are Tension Controlled at the Schneider Mill

Over 500 leading textile mills depend on Kidde Compensators to take the guesswork out of tension control. Kidde Compensators are precision instruments made of the most modern non-corrosive materials. They're a cinch to set, and automatically compensate for a change in the coefficient of friction as well as back drag. If you use quill winders on any kind of synthetic yarn, count on Kidde Compensators to (1) assure uniform tension throughout the quill; (2) control tension at bunch; (3) prevent sloughing off due to soft quills; (4) relieve yarn tension at *start* of bunch, thereby promoting longer quill life. Write today for full information.

Kidde

Walter Kidde & Company, Inc.

590 Main Street, Belleville 9, N. J.

FLOATING ACTION

THE SECRET OF SUCCESS FOR . . .

Type "L" JOHNSON *Rotary Pressure* JOINTS

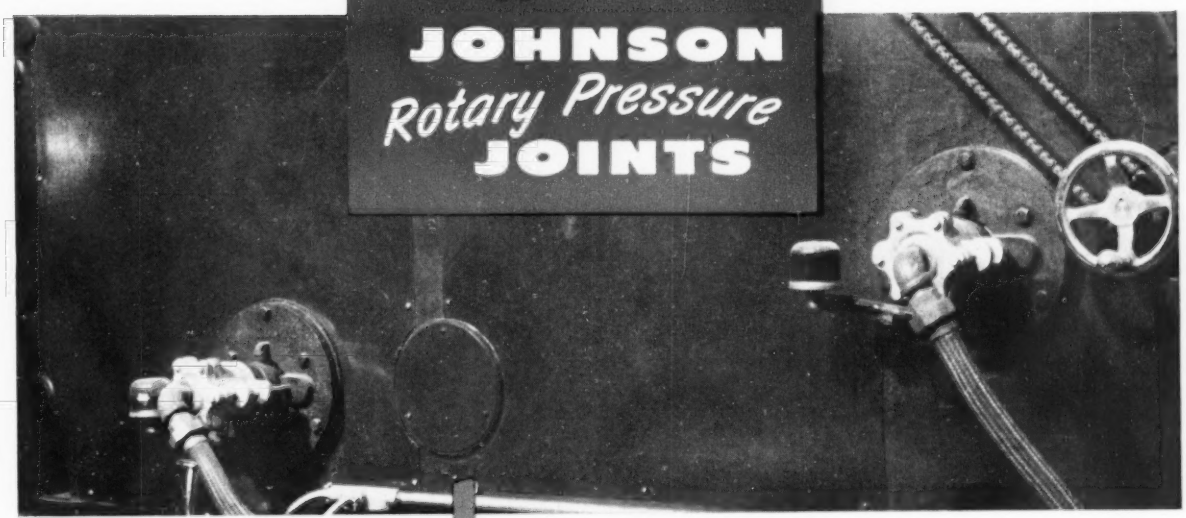
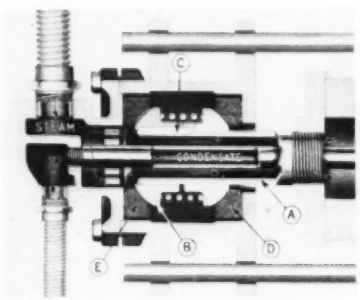


Illustration shows two of several Type "L" Johnson Joints installed on a sanforizing machine in a large southern textile mill. Note lugs on body to permit simple rod supports of the joint and the flexible hose connection permitted by this arrangement.



Packless, Self-Lubricating, Self-Adjusting, Self-Aligning

Nipple (A) is connected to roll. Collar (B) is keyed to nipple at (C), but fits loosely so pressure can fill entire housing. Pressure is sealing force, consequently self-adjusting. Seal ring (D) and bearing ring (E) are of special carbon-graphite; they eliminate packing or need for lubrication. Note room for lateral movement of rotating assembly, spherical seating for angular movement.

On sanforizing machines, dry cans, rayon and cotton slashers, the Type "L" Johnson Joint is fast becoming standard equipment. Machinery manufacturers, like mill men, recognize in the Type "L" the perfect answer to the special requirements of such machines.

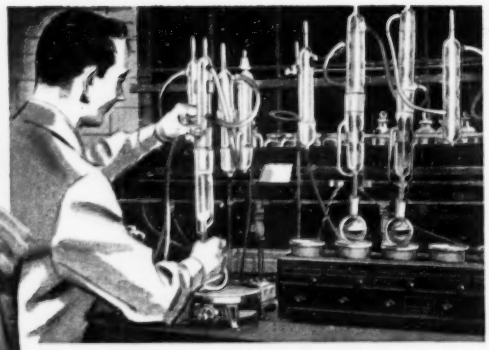
The Type "L" completely solves the problem of proper mounting so important to proper operation. Simple rod supports carry all the weight of the joint and its connections —literally "float" this load away from the rotating assembly. This design removes all excess wear from the sealing mechanism while permitting the full lateral flexibility built into all Johnson Joints. Longer life, increased efficiency and more trouble-free service are direct results.

The Type "L" is but one of a full line of Johnson Joints developed through unmatched experience to answer any and all operating requirements. They are available for use with stationary or rotating syphon pipes; write today for complete information.

Products of The Johnson Corporation

815 Wood St., Three Rivers, Michigan

Rotary Pressure Joints • Compressed Air Separators and Aftercoolers
Direct Operated Solenoid Valves • "Instant" Steam Water Heaters



The DURA BEAU GIRL of 1953

The Clamor for Glamour

Time-tested, sales-tested DURA BEAU Finishes are the textile "cosmetics" that reveal and enhance the beauty of all fabrics.

Hosiery-makers, the world over, have known for decades the magic of DURA BEAU— the finish that assures a sealed-in loveliness . . . stockings that are sheerer-looking, exquisitely dull, soft and fine . . . a product that has more buy-appeal because it has more eye-appeal!

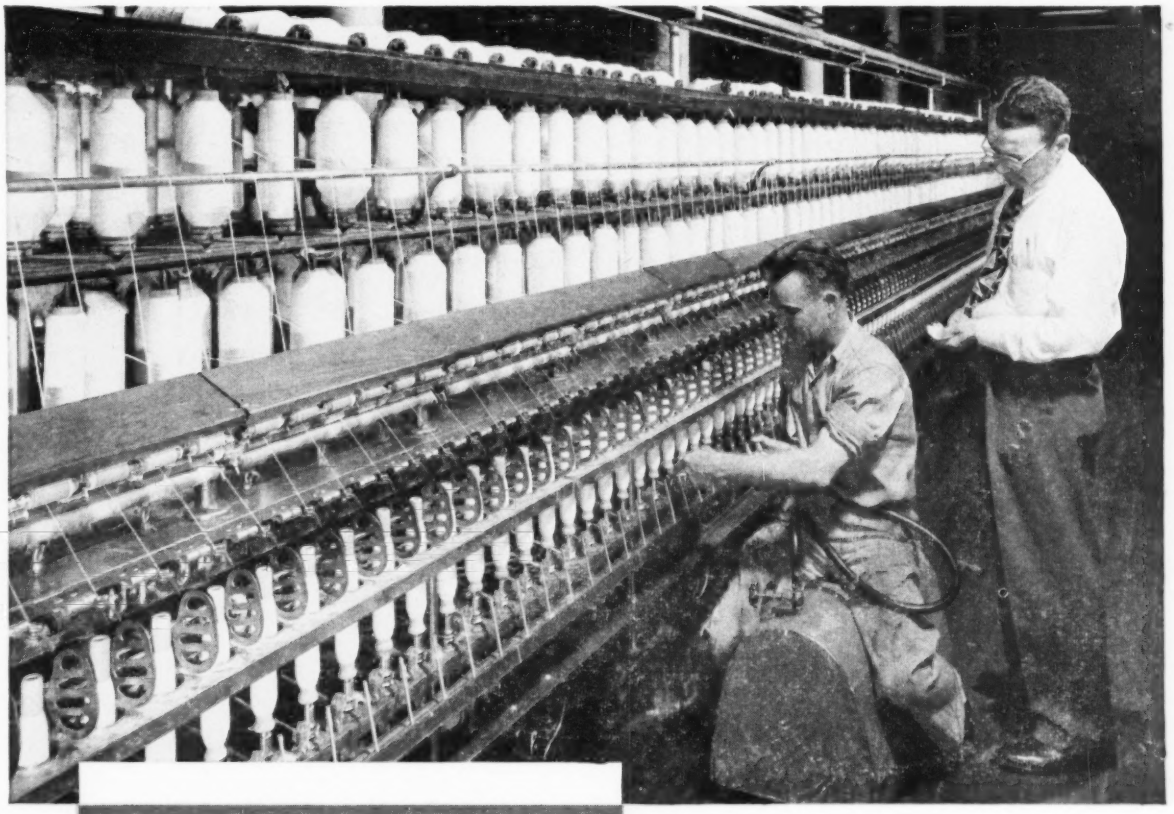
Dura Beau TEXTILE FINISHES

REG. U.S.A. and CANADA

In the field of hosiery, for instance, DURA BEAU Finishes have been used — for decades — on more stockings than all other finishes combined! Write, wire or phone for one of our practical fieldmen.

SCHOLLER BROS., INC. • Manufacturers of Soaps, Softeners, Sulfonated Oils and Finishes • Collins & Westmoreland Sts., Phila. 34, Pa.

IN CANADA: SCHOLLER BROS., LTD., ST. CATHARINES, ONTARIO



Gulfspin *keeps spindles clean!*

Here's why:

1. Resists formation of sludge

2. Prevents sludge from depositing on spindle surfaces

Spindle blades and bolsters stay clean when they are lubricated with the new Gulfspin.

Here is the important reason! Gulfspin not only has the inherent ability to resist the formation of harmful sludge, but also prevents sludge from depositing. And during periods when oil levels are low, Gulfspin's protective film insures against the formation of rust. Thus the need for costly cleaning of spindles and bolsters is eliminated—parts wipe clean easily.

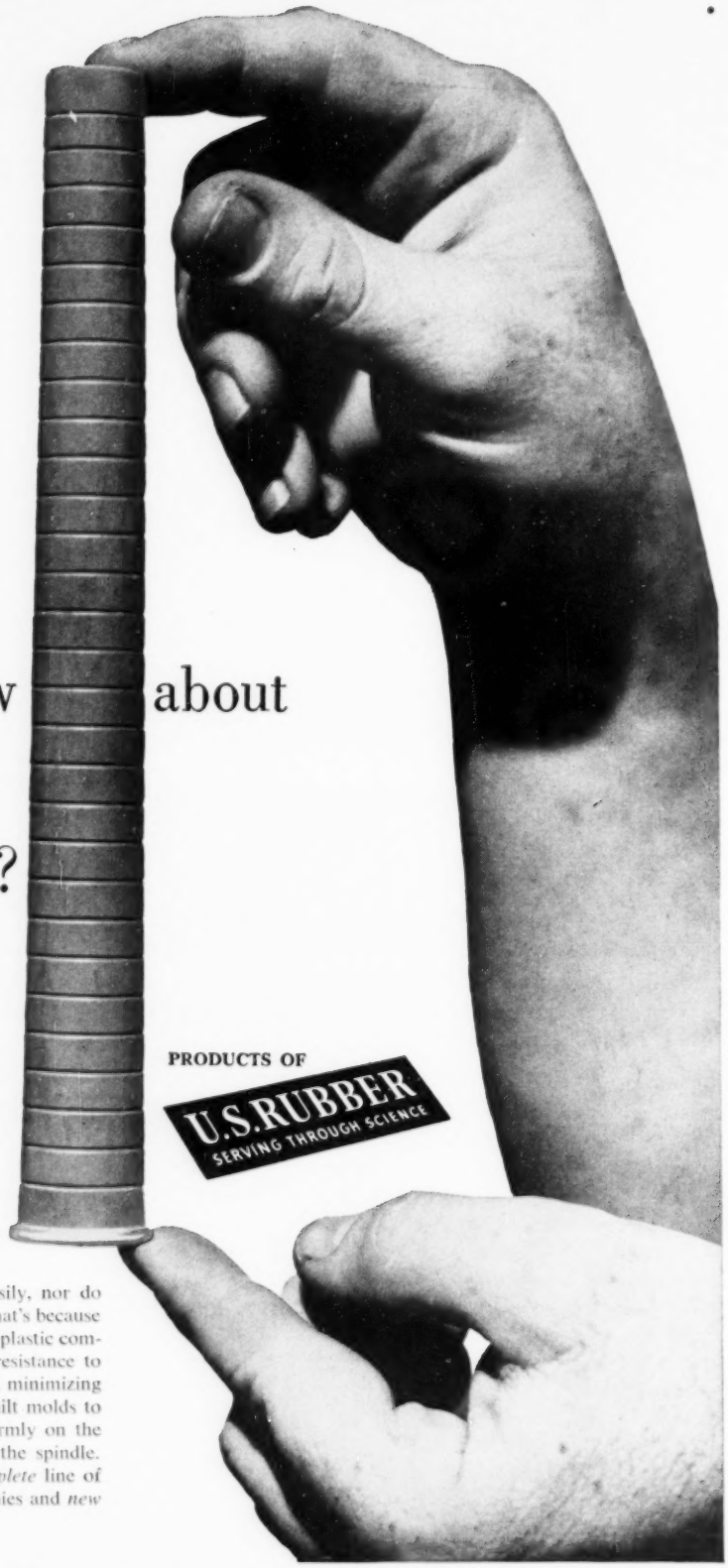
Gulfspin has excellent oiliness characteristics. It reduces the rate of bolster wear experienced with ordinary oils, insures freedom from spindle wobble.

Gulfspin, unlike conventional spindle oils, does not appreciably increase in viscosity even after extended use. This accounts for reports from users telling of substantial savings in power costs.

See for yourself—on your frames—that this new spindle oil is better in every way. Or write today for copy of a pamphlet on this outstanding new oil.

Gulf Oil Corporation · Gulf Refining Company
Gulf Building, Pittsburgh 30, Pa.

GULF SERVES INDUSTRY



What's new about U. S. Rubber's warp tubes?

PRODUCTS OF

U.S.RUBBER

SERVING THROUGH SCIENCE

First, they do not crush easily, nor do they chip, splinter or roughen around the ends. That's because they are made of Uscolite, the sensational rubber-plastic compound. Uscolite warp tubes provide maximum resistance to abuse in a thin-walled tube. They hold yarn well, minimizing sluffing. Because they are molded in precision-built molds to close tolerances, Uscolite warp tubes seat uniformly on the spindles. There is never any working down on the spindle.

United States Rubber Company makes a *complete* line of textile mill specialties, incorporating *new* economies and *new* highs in product quality. Write to address below.

UNITED STATES RUBBER COMPANY

MECHANICAL GOODS DIVISION · ROCKEFELLER CENTER, NEW YORK 20, N. Y.

Rayon Reports

Prepared Monthly by American Viscose Corporation, New York, N. Y. MAY, 1953

Study reconfirms launderability of rayon shirts of vat-dyed fabrics stabilized with Avcoset

Twenty consecutive launderings of white, cream, and yellow spun rayon shirts that had been treated with the Avcoset process, have clearly proved their commercial launderability.

This was the finding of a study conducted on 36 shirts at the College of Household Arts and Sciences, Texas State College for Women. The study was made under a Textile Research Fellowship sponsored by American Viscose Corporation.

The strength, dimensional change, and color retention values of the shirts were measured after 5, 10, 15, and 20 launderings.

Dry strength changes in the warp direction ranged from 7.5 to 26.2 per cent after 20 washings. In the filling direction changes ranged from 6.8 to 22.7 per cent. No rupturing nor visible damage occurred during the washings.

Dimensional changes, by Commercial Standard CS59-44, showed no positive or negative change greater than 1 per cent. Higher shrinkages noted in the seams were attributed to the thread used and the amount of tension applied during commercial laundry pressing procedure.

After the washings, plus ironings, the number of units of color difference in the cream shirts was 5.87, and in the yellow shirts, 3.50. Whiteness retention was 100 per cent throughout.

Inquiries about the Avcoset process for stabilizing rayon shirting and other fabrics are cordially invited. Complete technical assistance in its application is available from American Viscose textile technicians.

RAYON 20 YEARS AGO

NEW YORK, May, 1933—Makers of rayon blouses and dresses have created a "fifth season" — a late showing on summer apparel.

PHILADELPHIA, May, 1933 — Rayon is claiming a big share of the spotlights at the 29th Annual Knitting Arts Exhibition.

PARIS, May, 1933—"Peau du Diable" (Devil's Skin) is the name of a new wrinkle-finished rayon novelty material popular here.

MAKE USE OF Avisco® 4-PLY SERVICE

To encourage continued improvement in rayon fabrics, American Viscose Corporation conducts research and offers technical service in these fields:

1 FIBER RESEARCH
2 FABRIC DESIGN
3 FABRIC PRODUCTION
4 FABRIC FINISHING

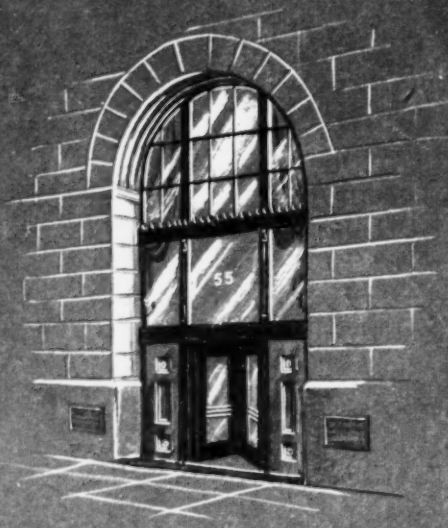
AMERICAN VISCOSE CORPORATION

America's first producer of man-made fibers

RAYON ACETATE VINYON® FILATEX®

Sales Offices: 350 Fifth Avenue, New York 1, N. Y.; Charlotte, N. C.; Cleveland, Ohio; Philadelphia, Pa.; Providence, R. I.

®FMC & CCC



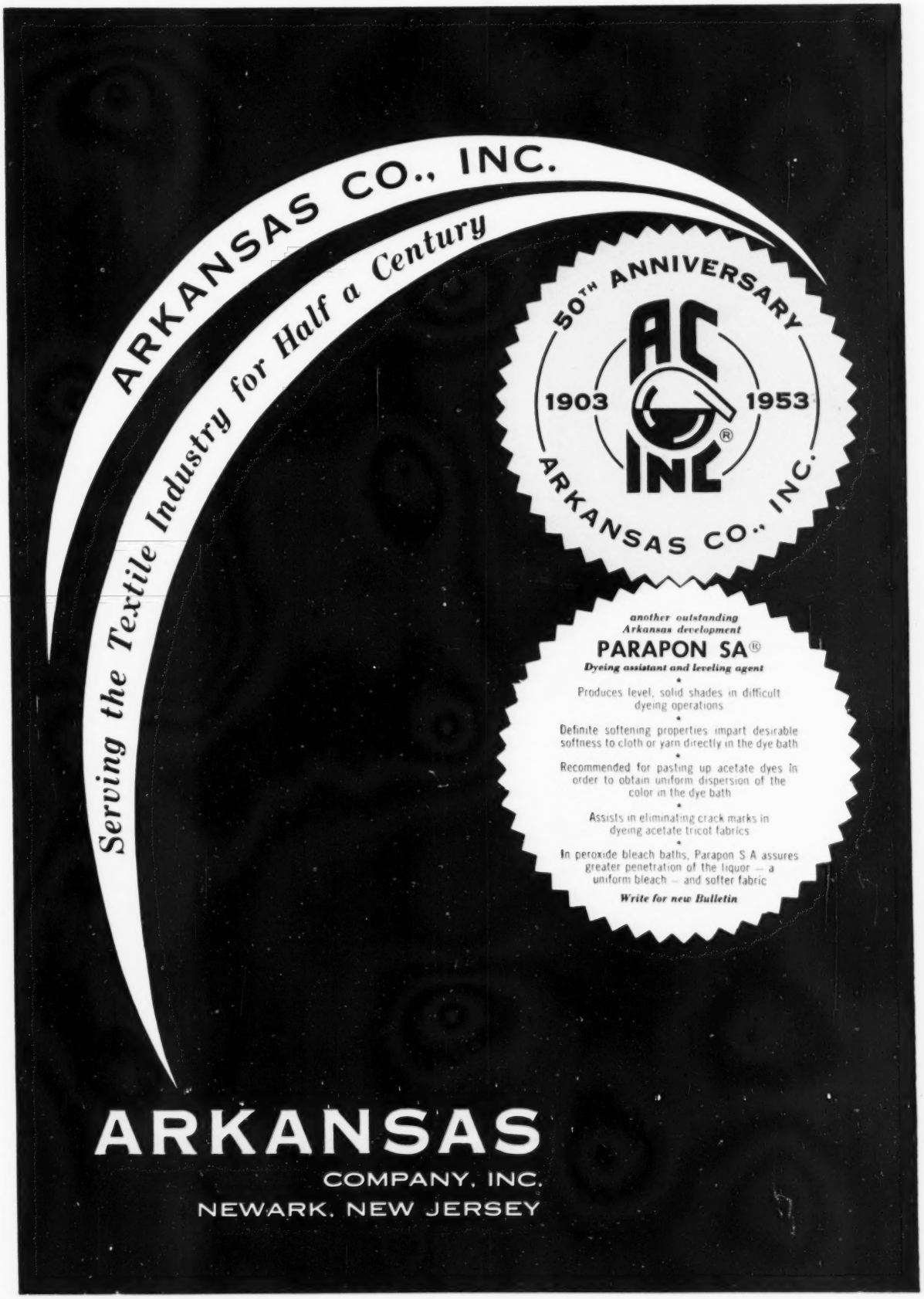
TEXTILE BANKING COMPANY

Inc.

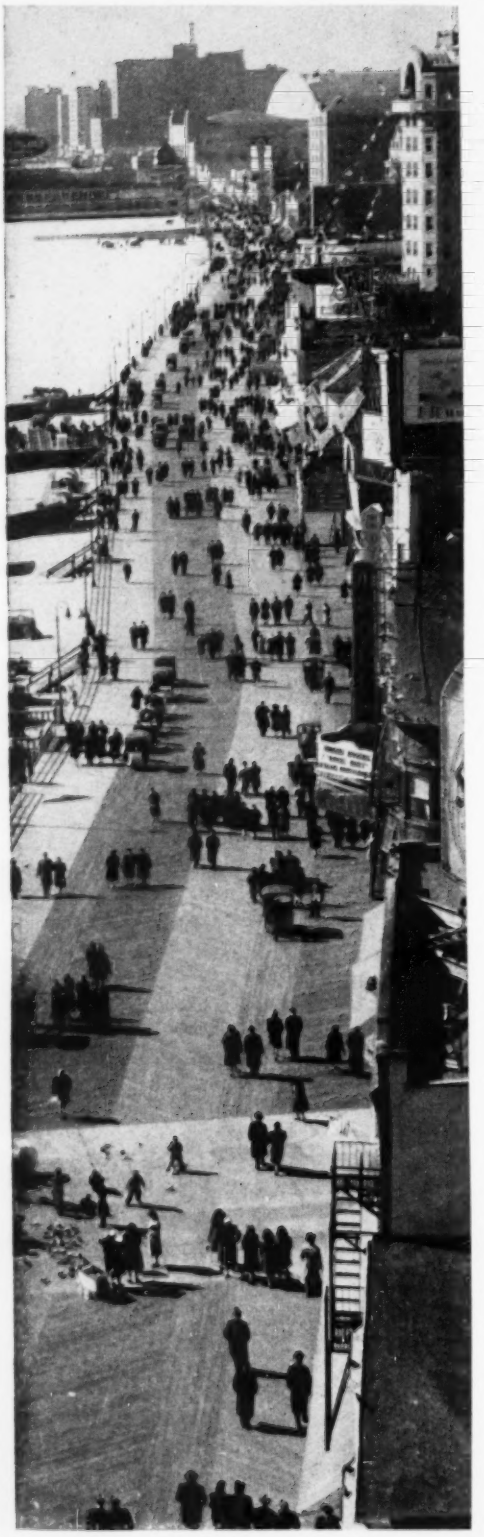
Factoring Service

Puts your sales on a cash basis
Strengthens your cash position
Relieves you of credit losses

55 MADISON AVENUE • NEW YORK


ARKANSAS CO., INC.
Serving the Textile Industry for Half a Century
50TH ANNIVERSARY
1903
AC
INC.®
1953
ARKANSAS CO., INC.
another outstanding
Arkansas development
PARAPON SA®
Dyeing assistant and leveling agent
Produces level, solid shades in difficult dyeing operations
Definite softening properties impart desirable softness to cloth or yarn directly in the dye bath
Recommended for pasting up acetate dyes in order to obtain uniform dispersion of the color in the dye bath
Assists in eliminating crack marks in dyeing acetate tricot fabrics
In peroxide bleach baths, Parapon S A assures greater penetration of the liquor — a uniform bleach — and softer fabric
Write for new Bulletin
ARKANSAS
COMPANY, INC.
NEWARK, NEW JERSEY

We'll See You in Atlantic City April 1954



April 1954 is some eleven months away, (give or take a few days depending upon your location and whether you read TEXTILE INDUSTRIES advertising pages promptly which we hope you do).

That sounds like a long way off and a lot can happen in eleven months, but time has a habit of passing quickly and the chances are pretty good that you will be operating in 1954 with much the same production problems and worries as today.

In Atlantic City, April 26-30, 1954, the American Textile Machinery Association is planning the largest and most impressive exhibit of textile machinery, equipment and supplies ever held in the U.S.A. It is not too early to start planning your own attendance and that of your key personnel at this exhibition.

"Biggest," "greatest," "most efficient" are typical American bywords, but it is true that the textile industry in the U.S.A. is the greatest in the world from a production standpoint. It is also true that machine speeds and productivity per operative have made possible a relative wage scale in the textile industry unmatched in the rest of the world.

This record is due to GREATER PRODUCTION EFFICIENCY. It is the only answer to rising wages, social pressure to keep raw material prices high and textile prices low as basic necessities (clothing and house furnishings). Also, it has been made possible through close cooperation between textile mill personnel and the machinery and equipment manufacturers that supply them. *Continued progress depends upon continued cooperation.*

It is not too early to think about which of your own key personnel who are responsible for production and operation and who know machinery and equipment should go to Atlantic City in April, 1954. Plan ahead for this exhibition.

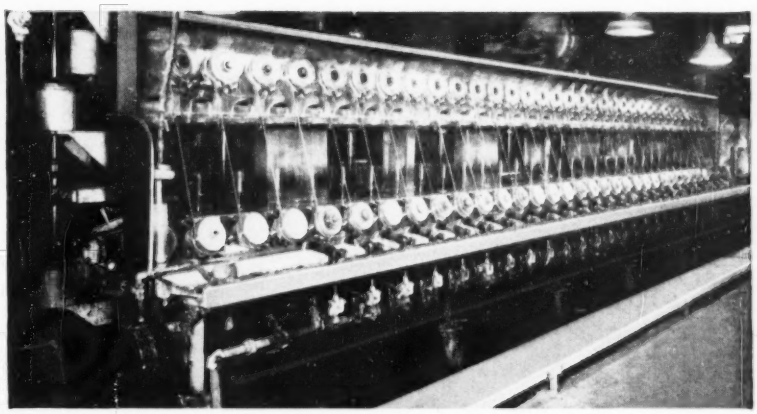
Don't postpone needed improvements and expansions this year because of the show. The advertising pages of TEXTILE INDUSTRIES; the engineers and salesmen of machinery, equipment and supply manufacturers will continue to bring you regularly the latest developments for increased production efficiency.

There are other fairs and exhibits such as the Knitting Arts Exhibit now in progress, the Textile Recorder Exhibition in England this fall, and the Greenville Show also in 1954. Attend all of them you can.

But figure on Atlantic City, April 1954, as a part of your over-all budgetting and planning for GREATER PRODUCTION EFFICIENCY.

We'll see you there.

Textile Industries



Latest Model Double-Sided Butterworth Pot Spinning Machine

PARTNERS in PROGRESS

The latest, fast traverse Butterworth Machine for spinning synthetic filaments is evidence of the way the 140 year old H. W. Butterworth & Sons Company keeps pace with advances made in textile chemistry. This machine builds firm cakes of good density and contour at exceptionally high traverse speeds. To achieve such rapid traverse strokes plus flexible, smooth operation, Butterworth has equipped this machine with a large number of Fafnir Ball Bearings . . . on the specially designed traverse mechanism, on shafts, fly wheels and gears.

Performance such as this machine delivers doesn't happen by chance. It's the result of long cooperation between Fafnir Engineers and Butterworth Designers. Thus good bearings aren't the sole answer to progress. Equally important is the Fafnir "attitude and aptitude" . . . a way of looking at bearing problems from the designer's viewpoint, an aptitude for supplying the precise bearing to fit the need. Maybe this combination can help you. The Fafnir Bearing Company, New Britain, Conn.

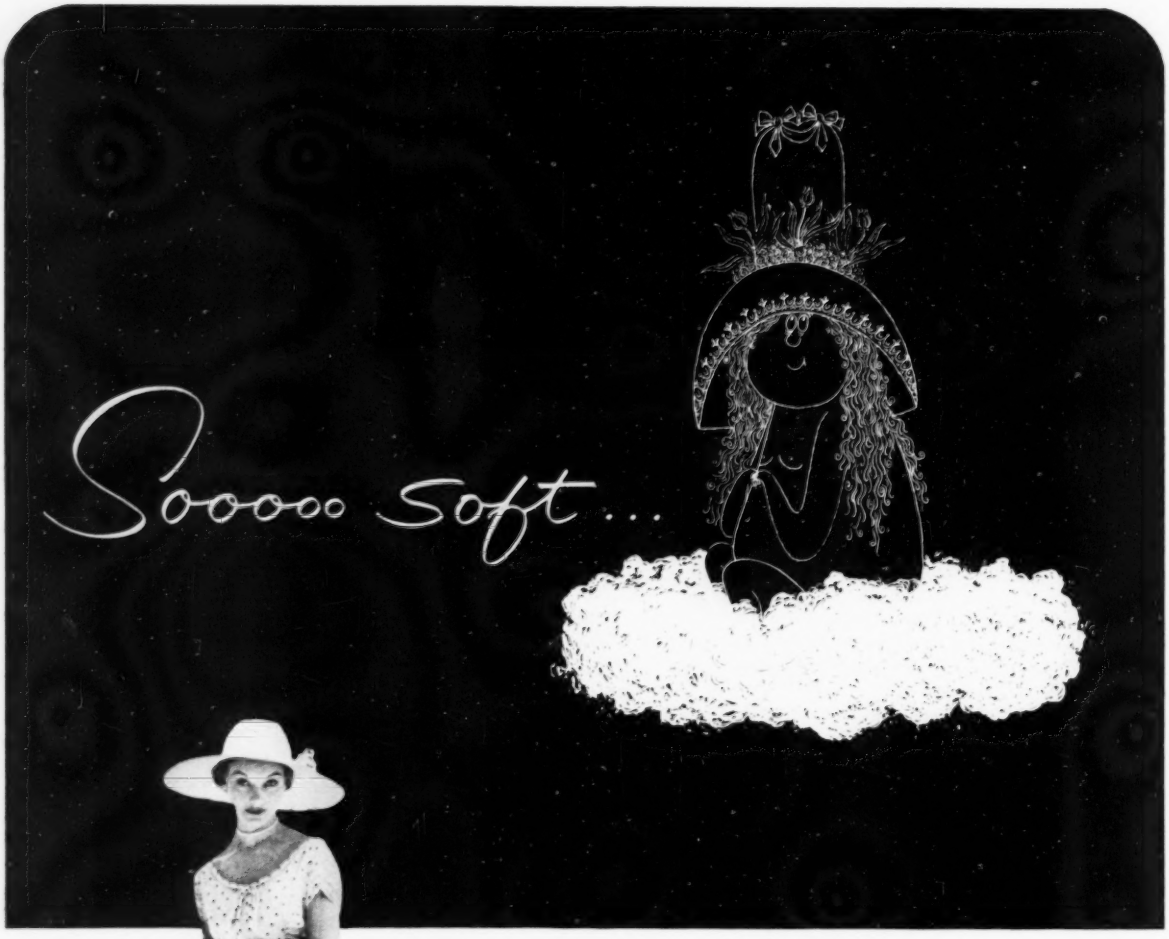
Fafnir Radial Ball Bearings used on flywheel, worms and gears of machine.

Fafnir Wide Inner Ring Ball Bearing with Self-Locking Collar and Mechani-Seals used on godet and traverse drive shafts.

Fafnir Plya-Seal Ball Bearings, prepacked with grease, used on spindle for each godet wheel.

FAFNIR
BALL BEARINGS
MOST COMPLETE LINE IN AMERICA

For further information use Handy Return Card, Page 206



And so drapable, so pleasant to work with and wear, so lightweight, so surprisingly *strong!* That's a word picture of many of today's most wanted fabrics, made possible by the use of Du Pont's modern-living fibers alone or in blends.

Softness is just one of the values you can have when you choose a Du Pont fiber to help you satisfy today's more demanding customers. There are other properties built right into the fibers, too . . . easy washability, fast drying, wrinkle resistance, pleat and shape retention, exciting beauty at small cost.

All these are positive advantages. You can feel and see and profit by them. And they are *planned* advantages . . . planned to meet the needs of modern living. You can count on Du Pont's leadership to help you keep pace with the newest advances in fiber research. And you can count on increased sales when you create fabrics for clothes and home furnishings made from Du Pont modern-living fibers.

Du Pont's Modern Living Fibers

NYLON | RAYON | ACETATE | ORLON® ACRYLIC FIBER | DACRON® POLYESTER FIBER

DU PONT

Reg. U.S. Pat. Off.

BETTER THINGS FOR BETTER LIVING . . . THROUGH CHEMISTRY

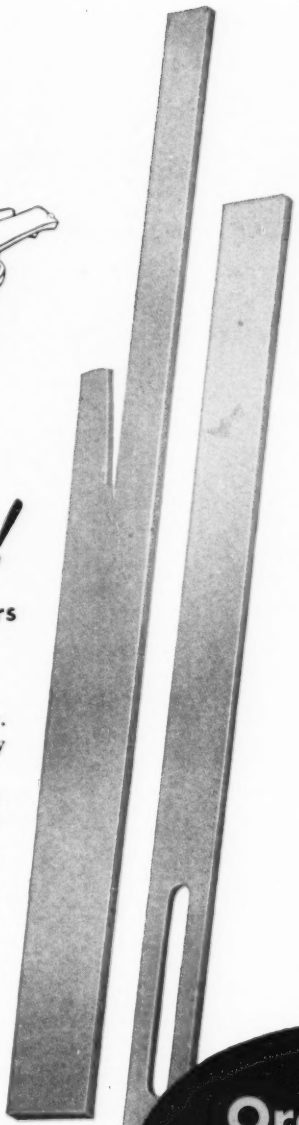
Try This on your Necktie!

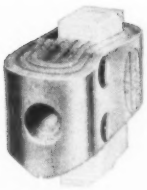
G&K Orange Line BOXMASTER Leathers do not catch or discolor the finest filament rayon

The edges are *smooth* — and they stay that way. No waxes or fillers are needed. Just rub lightly with a water-dampened cloth. Easy, isn't it!

BOXMASTER Binder and Box Plate Leathers are made of G&K Hairitan® leather — choice selected hides, specially tanned and treated for perfect boxing. Their tough resiliency "takes" the shuttle with cushion effect as it enters the box . . . their frictional surface brakes the shuttle evenly to a stop . . . their dense fibres form the smooth, *smooth* edges on which the finest filaments will not catch.

A large stock and hundreds of patterns are available to meet your needs for special shapes. Order through your local Distributor and specify G&K BOXMASTER HAIRITAN LEATHERS for perfect boxing.





Pickmaster® Pickers do not bounce the shuttle, or cause the shuttle spur to heat up. Assure smooth shuttle flight and accurate boxing.

Endless Check Straps provide controlled cushioning action for the picker stick. They are positioned perfectly for each pick, and conform to the angle of the picker stick at all points.

Condenser Tapes, Comb and Gill Box Aprons, and Grakorub Rub Roll Aprons are producing uniform rovings with less down-time. Made of selected G&K leather specially tanned and accurately fabricated in standard and special sizes.

FREE CATALOG

presents the complete Orange Line of Textile Leathers for weaving on Draper and Crompton & Knowles Looms—also Aprons and Tapes.

G&K Orange® Line Loom Leathers

1. STOP KINKY FILLING (No shuttle bounce)
2. REDUCE BANG-OFF (Perfect boxing)
3. CUT SHUTTLE COST (No hot spurs)
4. INCREASE PROFITS

MEMO: If your problem is power transmission, see your G&K Belting Distributor for:

HEART OAK® **top grade oak tannage**
RESEARCH® **premium quality special tannage**
SPARTAN® **combination tannage: resists moisture, fumes**

WRITE FOR FREE BELTING MANUAL 101

GRATON AND KNIGHT®

GRATON & KNIGHT COMPANY
Established 1851
Worcester 4, Mass.

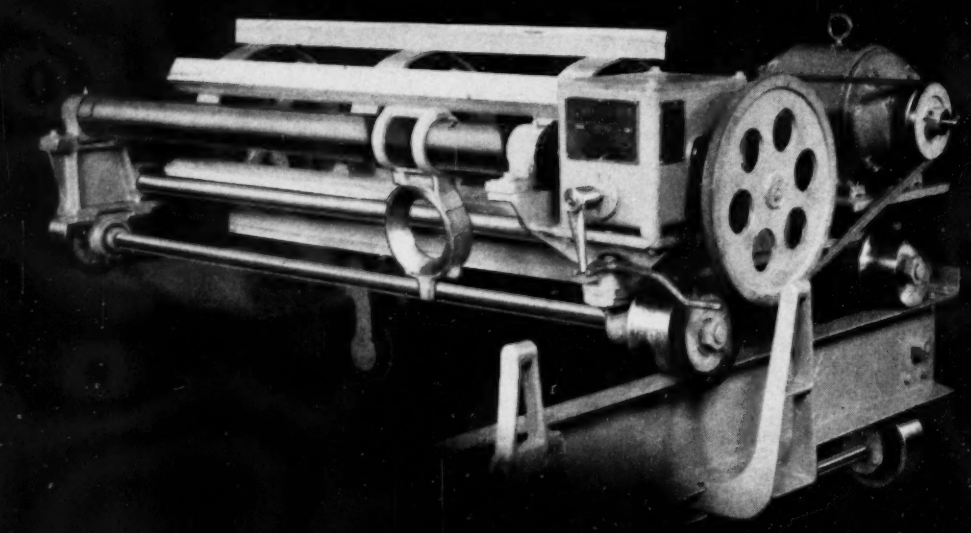
DIXIE LEATHER CORPORATION

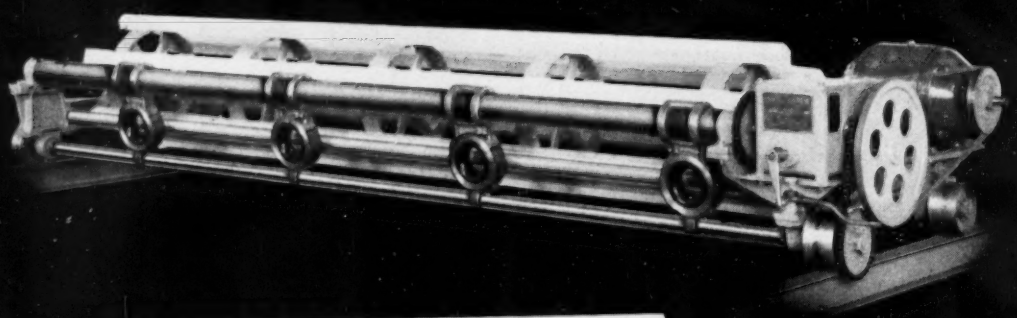
DIXIE LEATHER CORPORATION
Graton & Knight Company Affiliate
Albany, Georgia

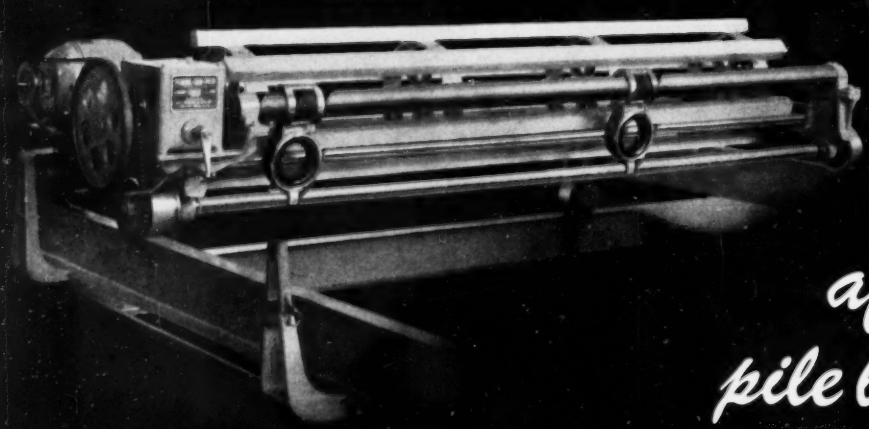
T-2

PERKINS AUTOMATIC BIN PILERS

PATENTED







You cannot afford to pile by hand

B. F. PERKINS & SON, INC.

ENGINEERS AND MANUFACTURERS

HOLYOKE • • • MASSACHUSETTS

NEED HELP WITH

Processing Problems?

CALL FOR THE HOUGHTON MAN...

He is constantly meeting up with a wide variety of problems as he's called into textile mills. You will not only get the benefit of his own experience in getting to the core of the problem, but back of him is the Houghton organization with years of research and development work in the textile processing field.

NEED PRODUCTION-IMPROVING

Processing Products?

Ask the Houghton Man about these when he calls . . .

FOR COTTONS . . . Depend on Houghto-Size sizing compounds . . . concentrated . . . providing high weave-room efficiency. For slicker warps with excellent fiber lay use also Houghto-Wax in the size kettle.

FOR WOOLENS . . . Sulfol 448, non-ionic stock lubricant for woolens and worsteds, which minimizes static, is odorless, non-staining, non-corrosive. Also Lanolubric wool oils, well known for over half a century for their dependable performance.

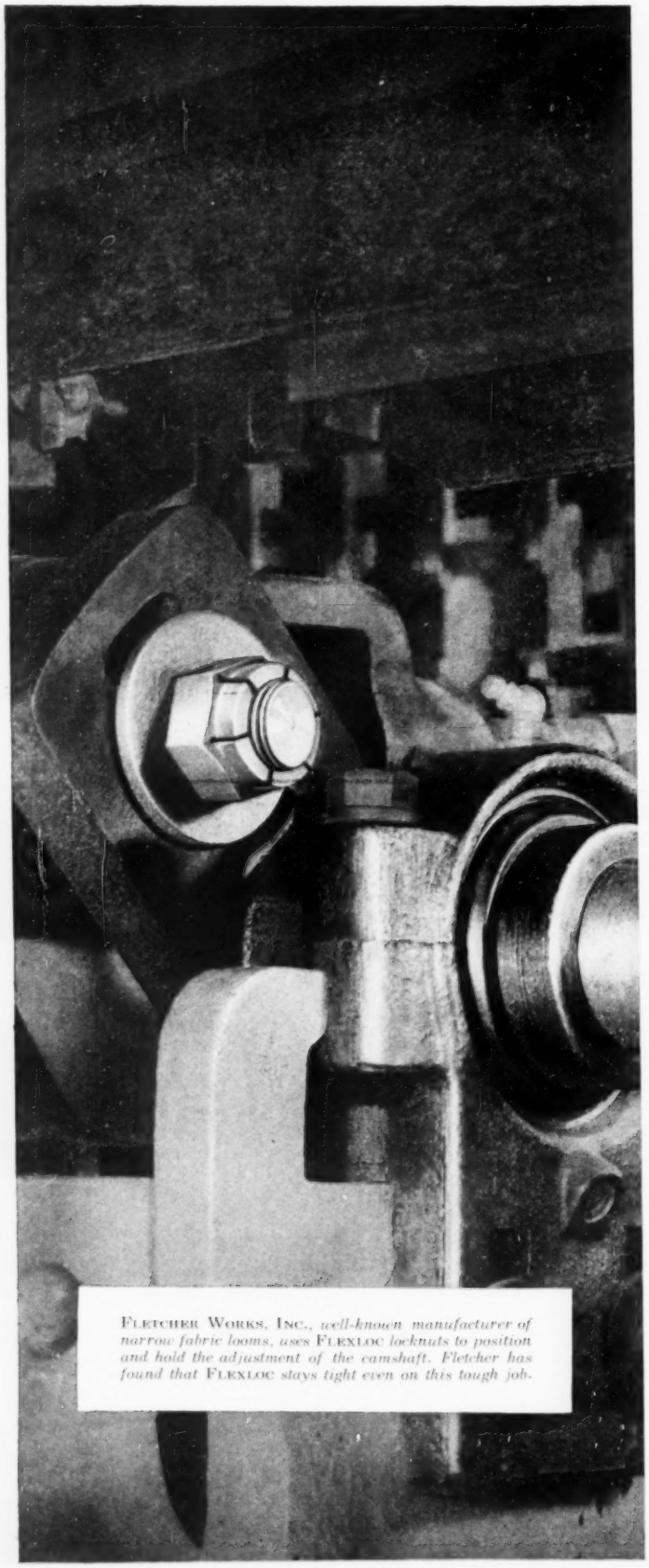
FOR SYNTHETICS . . . Raylubric oils for softening, soaking and throwing rayon and synthetic fibers.

Powdered Houghto-Size 475
NEW!
. . . a product of Houghton research that contains all the ingredients needed in a warp size softener. Assures highest slashing and weaving efficiency. Get further information—or let us make a size check-up test in your slasher room.
E. F. HOUGHTON & CO.

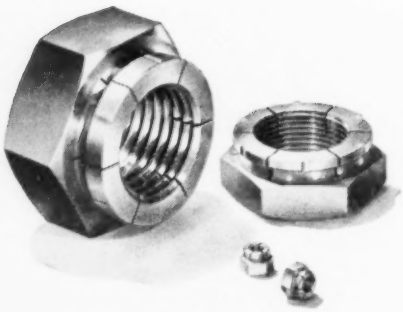
Ask your Houghton Man about the full line of Houghton surface active agents or write E. F. Houghton & Co., Philadelphia 33, Pa.

E. F. HOUGHTON & CO.
PHILADELPHIA · CHICAGO · DETROIT · SAN FRANCISCO

Ready to give you on-the-job service . . .



FLETCHER WORKS, INC., *well-known manufacturer of narrow fabric looms, uses* FLEXLOC *locknuts to position and hold the adjustment of the camshaft. Fletcher has found that* FLEXLOC *stays tight even on this tough job.*



How FLEXLOC locknuts reduce maintenance

FLEXLOCs reduce maintenance by staying where you put them. Once they are installed, you can forget them. Service and inspection periods can be stretched safely from days to weeks.

And FLEXLOCs eliminate complicated, time-consuming methods of locking threaded fasteners. They offer faster, simpler application, and safer, more dependable locking than plain nuts and lockwashers, castellated nuts and cotter pins, or nuts and jam nuts.

Use FLEXLOCs wherever you use an ordinary nut. These one piece, all metal locknuts—with nothing to assemble, come apart, lose or forget—won't work loose regardless of the vibration encountered. Yet they can be easily removed and used over and over again. FLEXLOCs are stop and lock nuts too. They don't have to seat to lock, and they stay put anywhere on a threaded member as soon as the locking threads are fully engaged.

You can get FLEXLOCs in a wide range of sizes in any quantity. Stocks are carried by leading industrial distributors everywhere. Write for literature and samples. SPS, Jenkintown 34, Pa.

FLEXLOC®

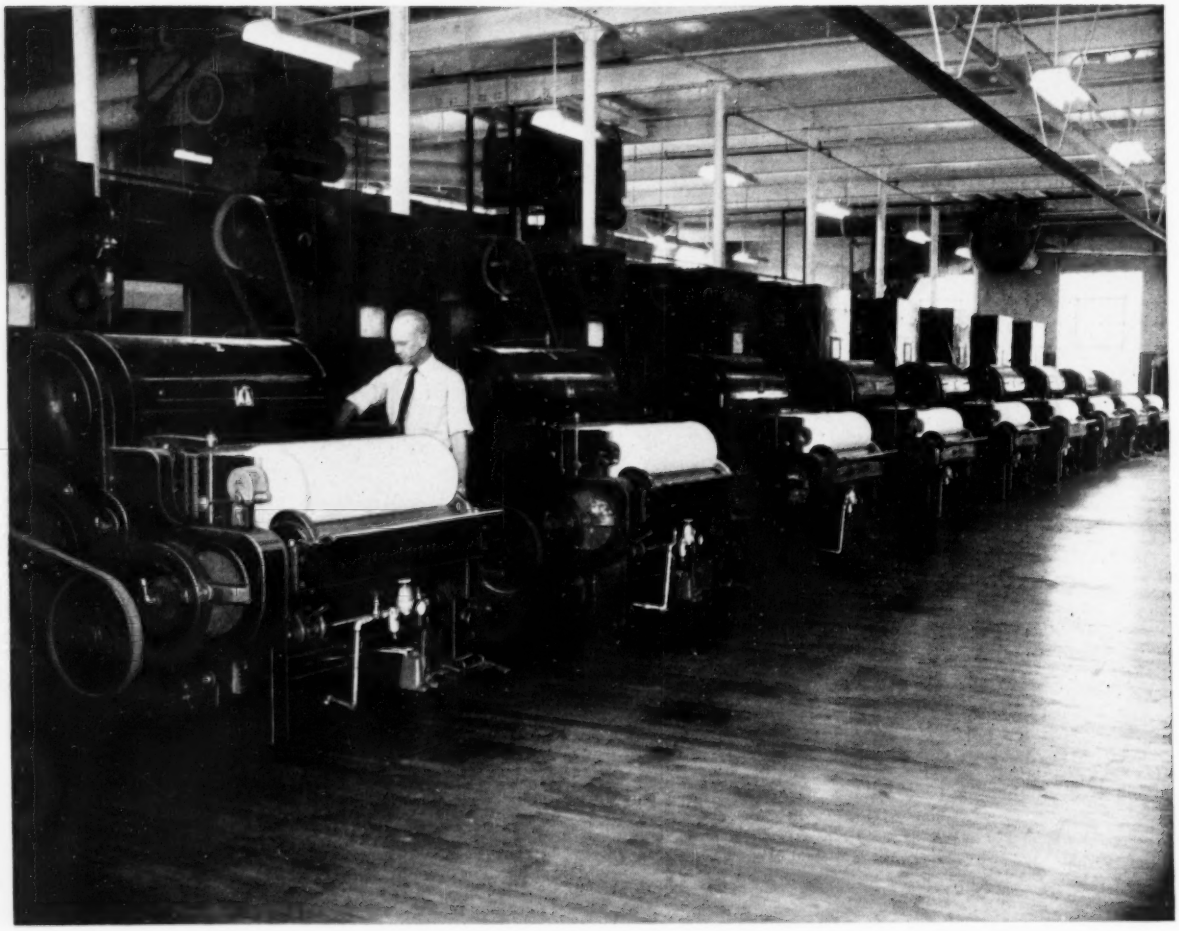
LOCKNUT DIVISION

SPS

JENKINTOWN PENNSYLVANIA

Our Fiftieth Year : A START FOR THE FUTURE

SYNTHANE
invites you to examine New Products* and
New Materials for Standard Products
BOOTHS 200-201-202. KNITTING ARTS EXHIBITION.
ATLANTIC CITY AUDITORIUM APRIL 27 TO MAY 1, 1953
*Including the revolutionary Collapsible Bobbin and laminated Vibrator Block
Textile Division
SYNTHANE
SYNTHANE CORPORATION
Laminated Plastics
14 River Road, Oaks, Pennsylvania



No Simple Task

THE SUCCESSFUL functioning of any machinery maintenance system, wherever it may be applied, depends on *how* the job of lubrication is done. Oiling and greasing must not be considered a simple task, for facts prove that the effects can be of major proportion. Analyzing the lubricant needs of the many types of machinery regarding loads, speed and atmospheric conditions, is a necessary part of an established maintenance program. Acceptance of products should be based on rigid performance tests. It has been the practice of Standard Oil to keep abreast with new developments and the needs of the textile industry, and develop from specially selected crudes, lubricants which are carefully distilled and processed to resist oxidation, gumming and wear to the highest degree. For assurance of efficient lubrication, consult one of our representatives. Remember—the combined facilities for research, testing and engineering behind the line of industrial lubricants he offers, are unequalled.

Standard Oil Company
(KENTUCKY)

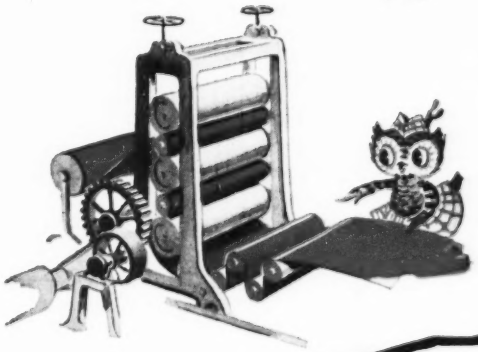
STANDARD OIL
LUBRICANTS

All these

AT NEW LOW COST...

Stabilization

Crush Resistance



Glazing and Embossing—

with RHONITE R-2

To give you the greater economy and improved efficiency of RHONITE R-2 we have not sacrificed these other familiar RHONITE advantages—(1) storage stability; (2) easy handling; (3) excellent durability.

P. S. *It's a good finish for nylons, too.*

RHONITE *is a trademark Reg. U.S. Pat. Off. and in principal foreign countries.*

CHEMICALS FOR INDUSTRY

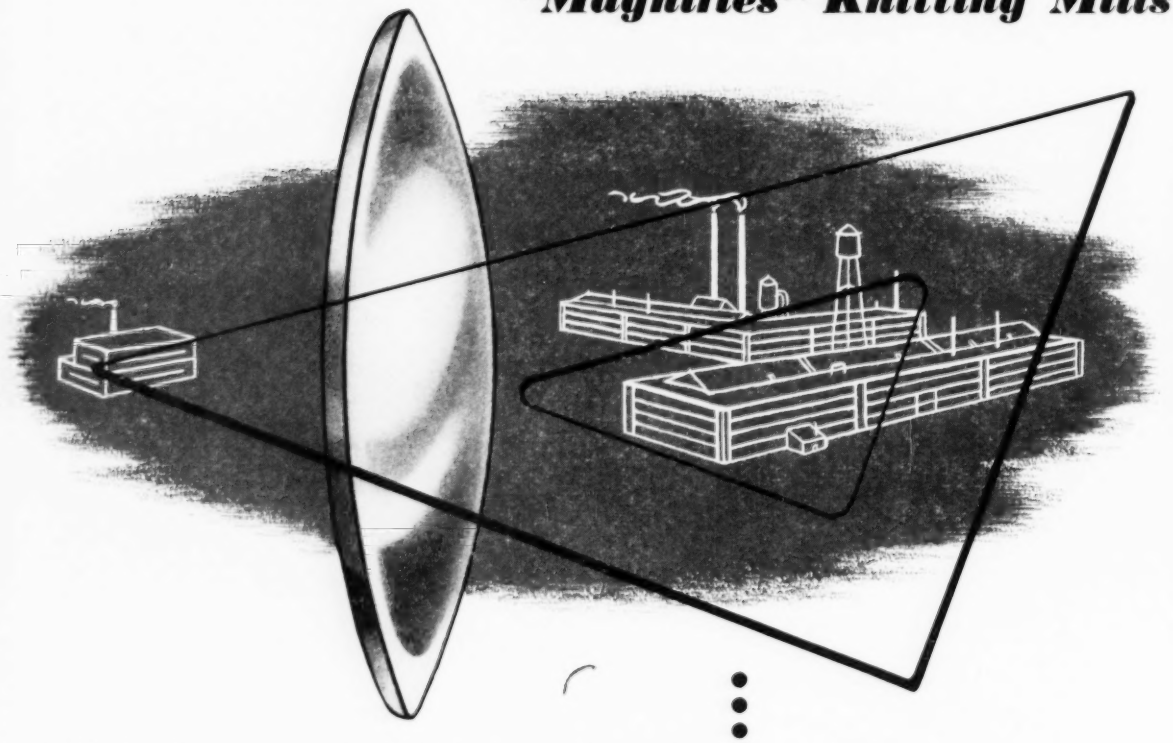
ROHM & HAAS COMPANY

WASHINGTON SQUARE, PHILADELPHIA 5, PA.

Representatives in principal foreign countries

HOW SUPREME ENGINEERING

"Magnifies" Knitting Mills



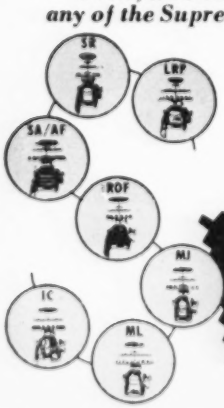
Without adding one inch of actual floor space, Supreme's engineering makes knitting mills bigger in output capacity . . . bigger in production versatility . . . bigger in profit-knitting power.

How? Supreme does this by creating knitting machines that *multiply* a mill's *knitting-ability*.

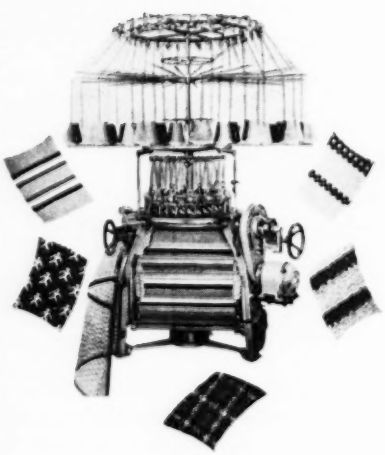
Look into the modern Supreme line. In model after model you'll find multi-machine fabric versatility and production rates that "magnify" a knitting mill in its customers eyes.

You'll also see the basic construction features that assure long-lived, low-maintenance operation. These standardized features give all **Supreme's** a family resemblance that simplifies life for your knitter-mechanics.

Write, wire or phone today for complete information on any of the Supreme's shown on this page.



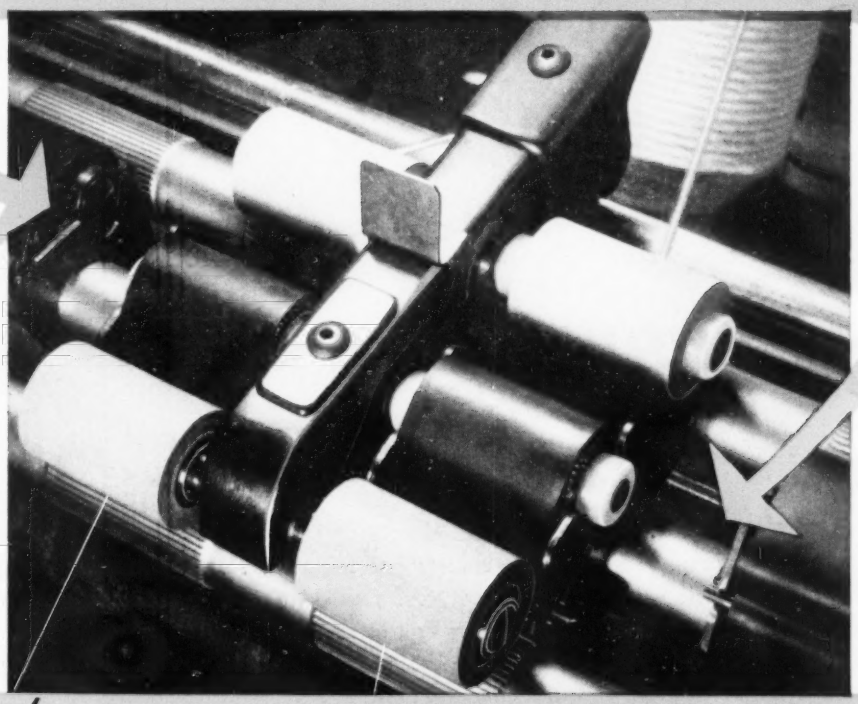
SUPREME
KNITTING MACHINE CO., INC.
107 JOHNSON AVE., BROOKLYN 6, N. Y.
Southern Representative and Showroom:
The Mallack Co., 713 S. Tryon St., Charlotte, N. C.



For example—Here's Model LT/SAAF "A ONE-MACHINE KNITTING MILL"— This automatic variable striper and pattern placer machine knits a tremendous variety of Terry and Jersey fabrics at terrific production rates. Switches easily from one to the other.

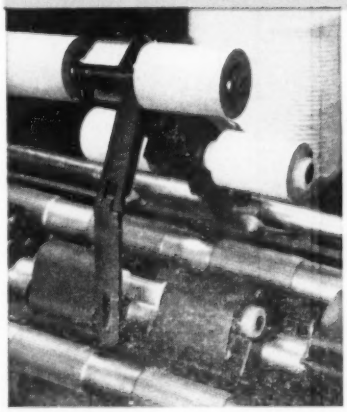
SK-162

That's Right—NO CAP BARS!



Brand New **CleanAlign Saddle**

PATENTS PENDING



Rolls swing up for cleaning

eliminates ⅔ of the area to be cleaned, because there are NO cap bars

CLEANALIGN maintains rolls in perfect parallel alignment at all times. Illustrated in use with CLEANDRAFT Non-lubricating Top Rolls in back and middle lines and CLIMAX Ball-bearing Top Rolls on front line—

CLEANALIGN Saddle forms a completely non-lubricated arrangement: eliminating oiling expense; giving oil-free yarn; reducing picking cost by 75% to 90%.

The CLEANALIGN Saddle permits wide variety of weight distribution, easily changed.

Piecing-up from side possible.

The CLEANALIGN Saddle is applicable to practically any cotton spinning system.

FOR FURTHER INFORMATION ADDRESS

PRODUCT SALES, INC. 21 VERNON STREET WHITMAN, MASS.

Ala., Ga., La., Miss. & Tenn.	*South Carolina*	*Va. & N. C.*	*Ark., Tex., Okla.*	*For European Service:*
J. H. Canady	Dudley Dunlap	Raymond L. McCauley	Texas Roller	Victor Beecroft
3344 LeBron Ave.	Product Sales, Inc., P. O. Box 1863	Product Sales, Inc.	Covering Works	54 Boroughgate
Montgomery, Ala.	Room 502 Montgomery Bldg.	412 Wilder Bldg.	1407 North 17th St.	Otley, Yorkshire, England
	Spartanburg, S. C.	Charlotte, N. C.	Waco, Texas	

FOREIGN REPRESENTATIVES IN THE PRINCIPAL TEXTILE CENTERS OF THE WORLD

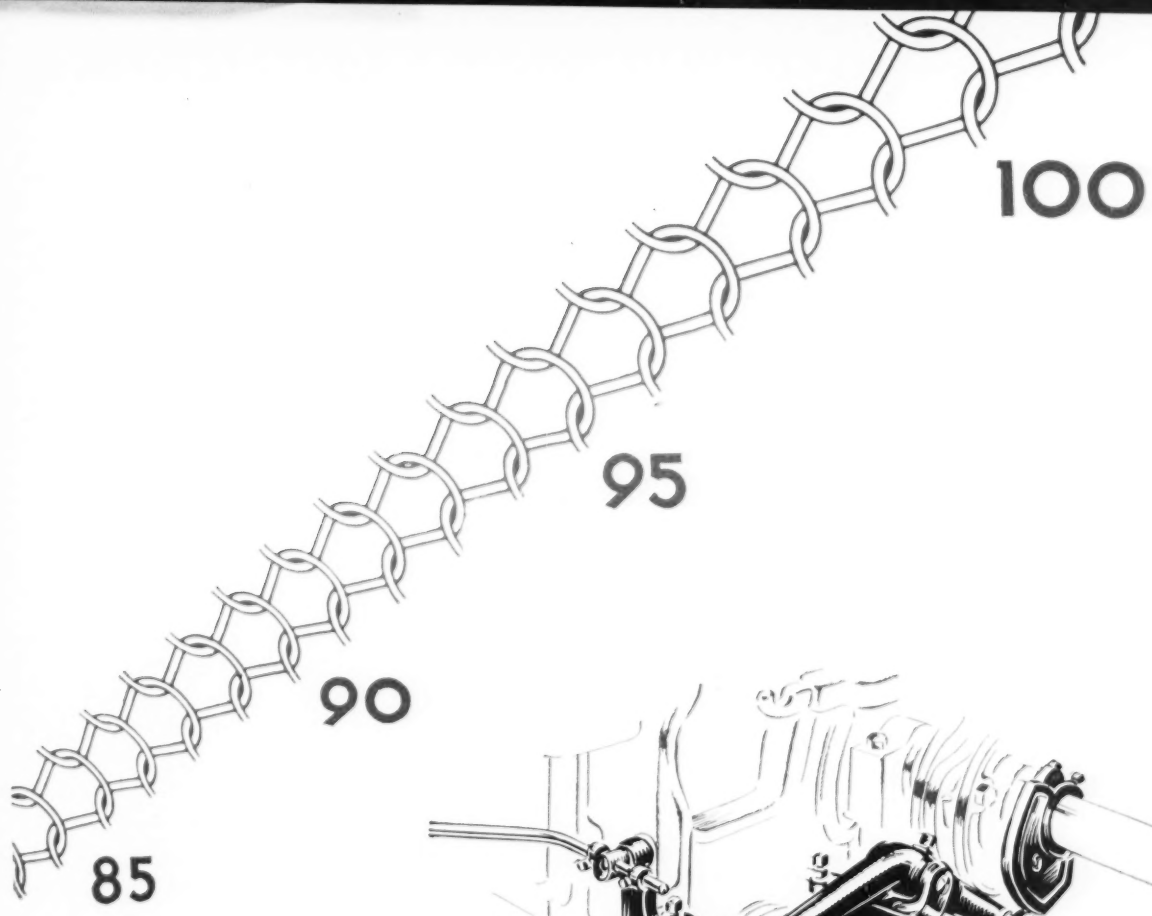
It knits 100 courses per minute

Extra courses per minute . . . Extra dozens per hour . . . Extra profits. How do *your* production figures compare with those established by the fastest full-fashioned knitting machine ever built? . . .

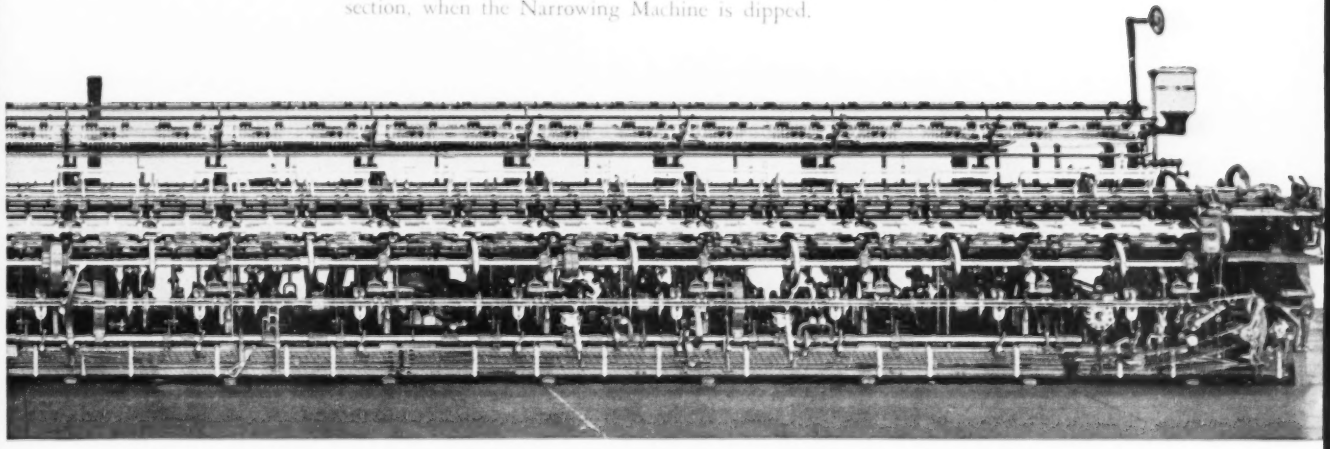
The "READING 100"
Full-Fashioned Knitting Machine

30 SECTIONS

51 GAUGE



Improved Inside Selvedge Attachment . . . assures a clean, even selvedge during narrowing or widening while the reinforced section of the fabric is being knitted. Prevents excess yarn from being fed around the next sinker, beyond the inside edge of the reinforced section, when the Narrowing Machine is dipped.

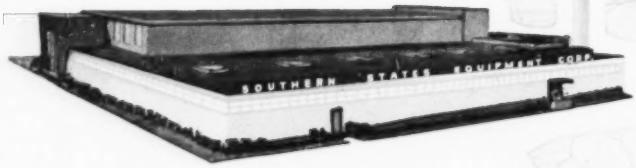


60 GAUGE

66 GAUGE

TEXTILE MACHINE WORKS
READING, PENNA., U. S. A.

in the HEART



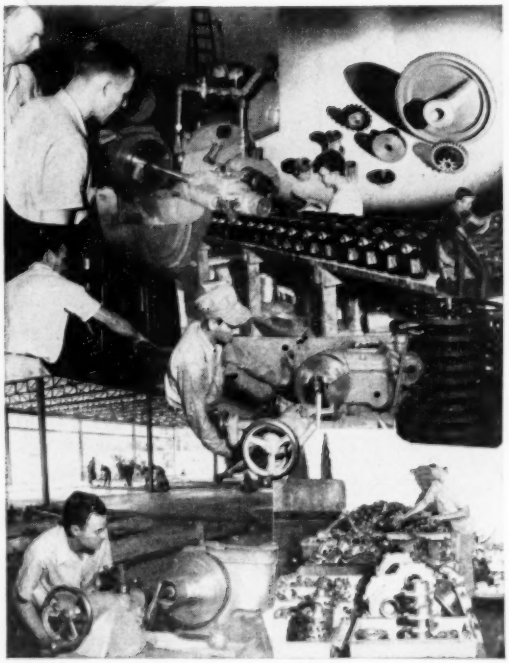
★ Hampton

of the TEXTILE INDUSTRY

To meet the ever increasing demands for Southern States replacement parts and textile specialties, a substantial expansion of manufacturing facilities has been completed. Located in the heart of the rapidly expanding textile industry, Southern States offers complete engineering and fabrication service on replacement parts. These new facilities make it possible for a large number of the more rapidly wearing parts for preparatory equipment to be shipped from stock.

Working closely with textile manufacturers, Southern States engineers have developed such money saving devices as the Type C-1 Ball Bearing Comb Box, Off End Stand, the new SS Individual Card Drive and Coiler Conversion Units for cards and drawing frames.

An integral part of the textile industry for more than 40 years, Southern States is now equipped to serve you better than ever.



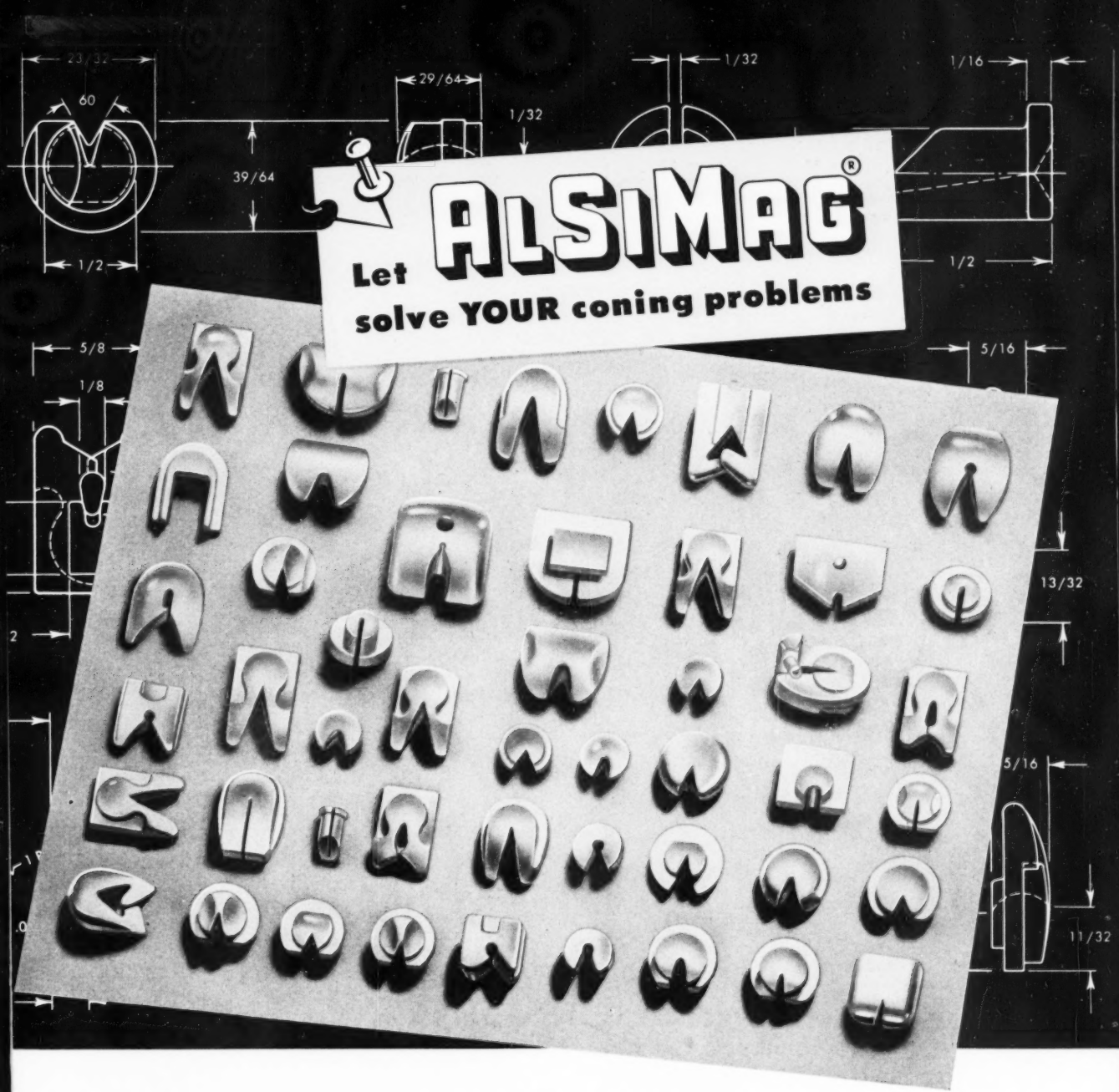
Southern States Equipment Corp.

HAMPTON GEORGIA

Representatives - Mechanical Division

William A. Knapp Atlanta, Georgia	Matthews Equipment Co. Providence, R. I.	John C. Walters Hampton, Georgia	C. H. Kennington Charlotte, N. C.	Frank Birchfield Alex. City, Ala.	Textile Parts & Machine Co. Gastonia, N. C.	F. C. Todd, Inc. Gastonia, N. C.

Largest Manufacturer of Cast-Tooth and Cut-Tooth Gears in the South



We thought we'd made every shape, size and type of coner button on the face of the earth. BUT nearly every week someone sends us a new sketch, has a new idea—and we make a new design . . . Textile men look at our samples and say, "That's fine, but can you change it this way?" We can, in almost every instance.

If these pictures give you an idea, send us your suggested modifications and let us show you what we can do.

The RIGHT coner button can do wonders for your production. Test samples made to your design at reasonable cost. Special designs in coner buttons do not require expensive tooling charges.

52ND YEAR OF CERAMIC LEADERSHIP

AMERICAN LAVA CORPORATION

CHATTANOOGA 5, TENNESSEE

SALES ENGINEERS: NORTH AND EAST: Jay S. Gosnell, 671 Broad St., Newark, N. J., Mitchell 2-8159. SOUTHEAST: Joe E. Spearman, 401 Belton St., Charlotte, N. C., 4-1525. ALL OTHER AREAS: J. B. Shacklett, American Lava Corporation, Chattanooga 5, Tenn., 5-3411.

Destination for every textile executive in OCTOBER 1953

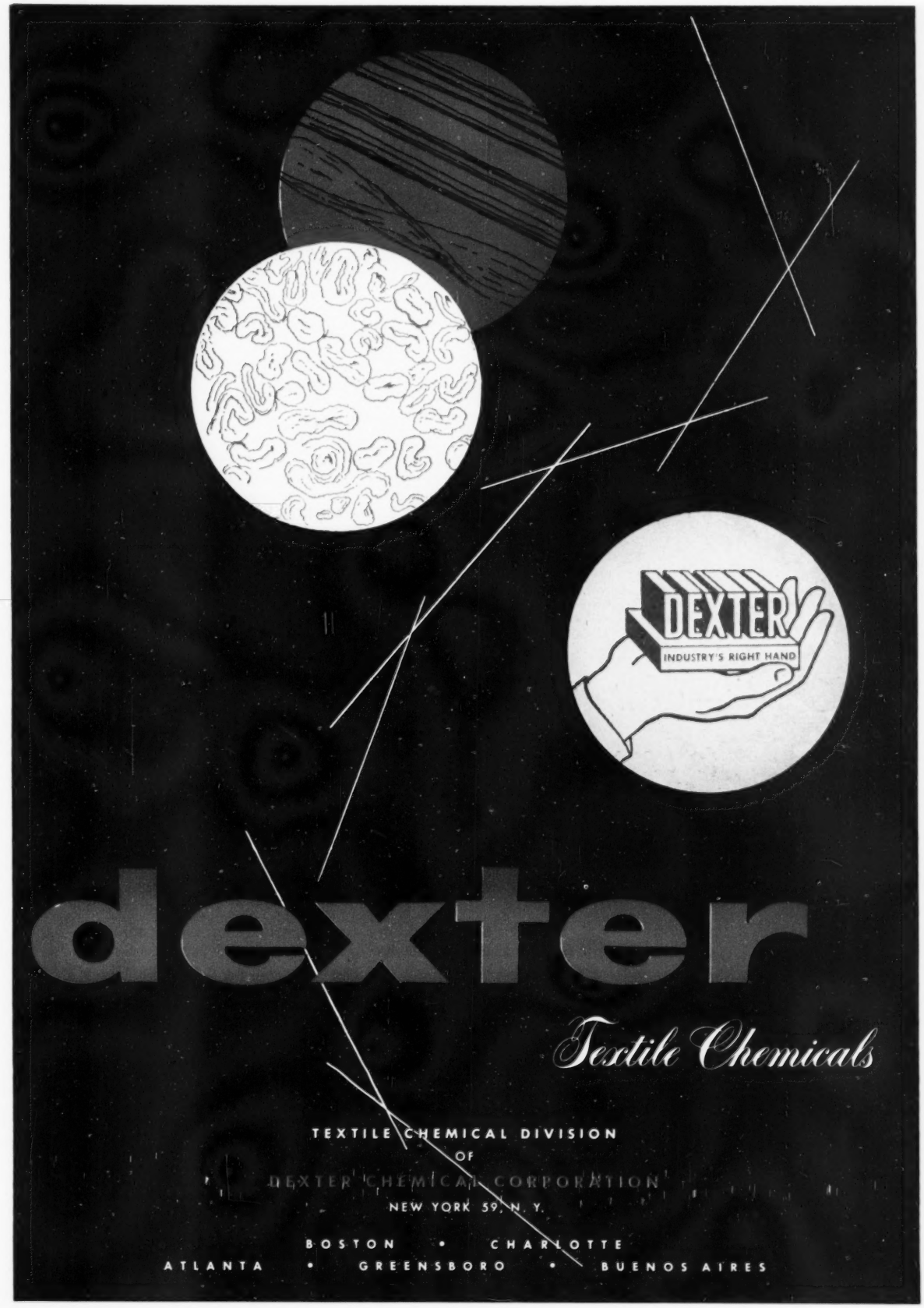
250 exhibitors from nine countries, occupying 90,000 square feet of stand area, will welcome you at Belle Vue next October. 50 more exhibitors and 33,000 more square feet than the record-breaking 1949 Exhibition.

Every section of the textile machinery and accessories industries will be represented covering spinning, winding, sizing, weaving, finishing machinery and also ancillary equipment for cotton, wool, worsted, rayon and synthetic textiles.

Decide now the dates of your visit

Write for leaflet giving details of facilities etc.

"TEXTILE RECORDER" EXHIBITIONS LTD., Old Colony House, South King Street, Manchester 2, England


DEXTER
INDUSTRY'S RIGHT HAND
dexter
Textile Chemicals
TEXTILE CHEMICAL DIVISION
OF
DEXTER CHEMICAL CORPORATION
NEW YORK 59, N. Y.
BOSTON • CHARLOTTE
ATLANTA • GREENSBORO • BUENOS AIRES

"Charlie—what do you suppose happens to boys who don't use **Swift's Soaps?"**

Our customers tell us that Swift's Soaps save time and money in textile operations. There are many good reasons why you, too, will find the right soap in Swift's complete line.

Swift's Soaps have excellent physical form . . . proper uniformity of composition.

Swift's Soaps perform outstandingly in dyeing, fulling, scouring and other specialized operations.

Swift's Soap line is complete . . . there's a *right* soap product for every textile need.

Swift's Soaps are backed by our years of specialized experience and research. We're ready to put all our resources to work to help solve particular soap problems.

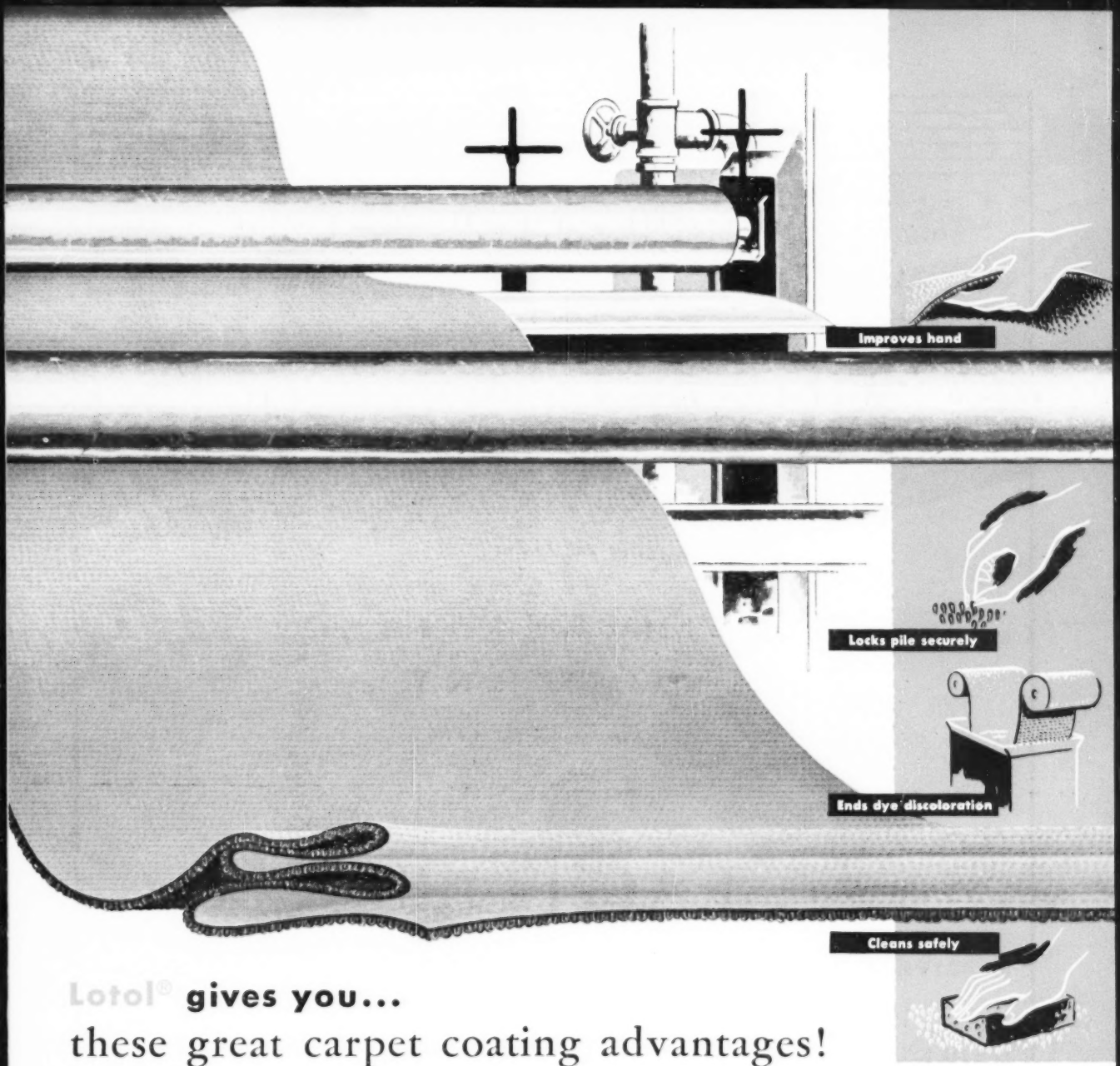
Swift's Soaps are sold from coast to coast with distribution points strategically located to assure prompt delivery of these and other fine Swift's Soaps!

Vertex Flakes • 557 Flakes • White Ribbon Chips • Wool Flakes

Call **SWIFT** first for **SOAPS**

SWIFT & COMPANY

Soap Department, Chicago 9, Illinois



Lotol® gives you...

these great carpet coating advantages!

1. Finer hand and body! Naugatuck's Lotol—a specially developed latex compound—gives carpets greater weight and body, improved resilience, and lasting flexibility. .

2. Stronger pile locking! Lotol's superior tensile properties lock pile for life—increase locking strength—prevent raveling, wrinkling, and fraying.

3. Outstanding resistance to dye bath! Lotol has minimum effect on dye shades—withstands as much as 8 hours in boiling dye without any discoloration or breakdown.

4. Excellent cleanability! Lotol-backed carpets can be cleaned time and time again without danger of shrinking, odor, or other harmful effects.

Lotol compounds—proven in paints, textile and leather treatment, paper impregnation, and dozens of other uses—are just one of many reasons why Naugatuck is your finest source of latices, for bonding, coating, dipping, or any latex need.

Find out more about Lotol and how it can help you produce a finer carpet, more economically. Write to address below.

Naugatuck Chemical

315 ELM STREET
NAUGATUCK, CONNECTICUT

Division of United States Rubber Company

BRANCHES: Akron • Boston • Charlotte • Chicago • Los Angeles • Memphis • New York • Philadelphia
IN CANADA: Naugatuck Chemicals, Elmira, Ontario

L. F. Dommerich & Co., Inc.

Executive and General Offices

271 MADISON AVENUE

NEW YORK 16, N. Y.

Telephone: Murray Hill 3-8650

FACTORS

For Manufacturers and Merchants

Inquiries as to our services solicited

●

BUSINESS ESTABLISHED 1840

TORRINGTON'S COMPLETE NEEDLE SERVICE...

assures maximum versatility in Raschel knitting

The great diversity of raschel fabrics in increasing demand in many different markets makes Torrington service a valuable production asset to the raschel knitter. For Torrington is a dependable source for highest quality raschel needles . . . precision-leaded or unmounted . . . in any style, size and quantity. Longer needle life, more efficient machine operation and superior knitting quality are all *bonus* features of Torrington needles. To profit fully from the remarkable versatility of your raschel machines, specify Torrington for all your needle requirements. Write or 'phone our nearest office for complete information.

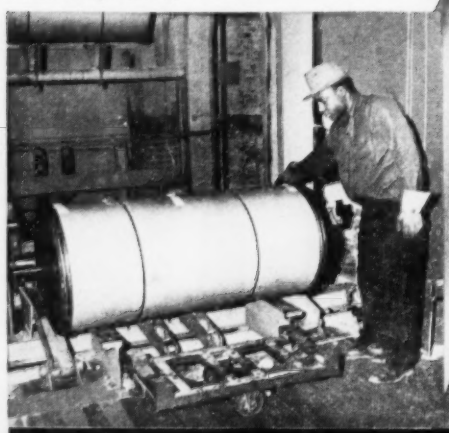
THE TORRINGTON COMPANY
Torrington, Conn., U.S.A.
Established 1866

SPRING BEARD · LATCH · LEADED AND PARTS

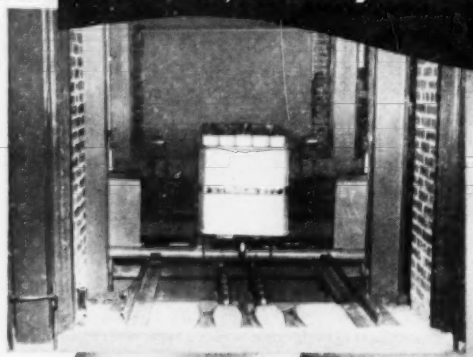
TORRINGTON NEEDLES

Branches: New York · Philadelphia · Chicago · Boston · Greensboro, N.C. • St. Louis • Bedford, P.Q.–Toronto, Canada • *Pacific Coast Representative:* E. G. Paules, 1762 W. Vernon Ave., LosAngeles 37, Calif. • Broadgate House, 7-10 Eldon St., London E.C.2, England

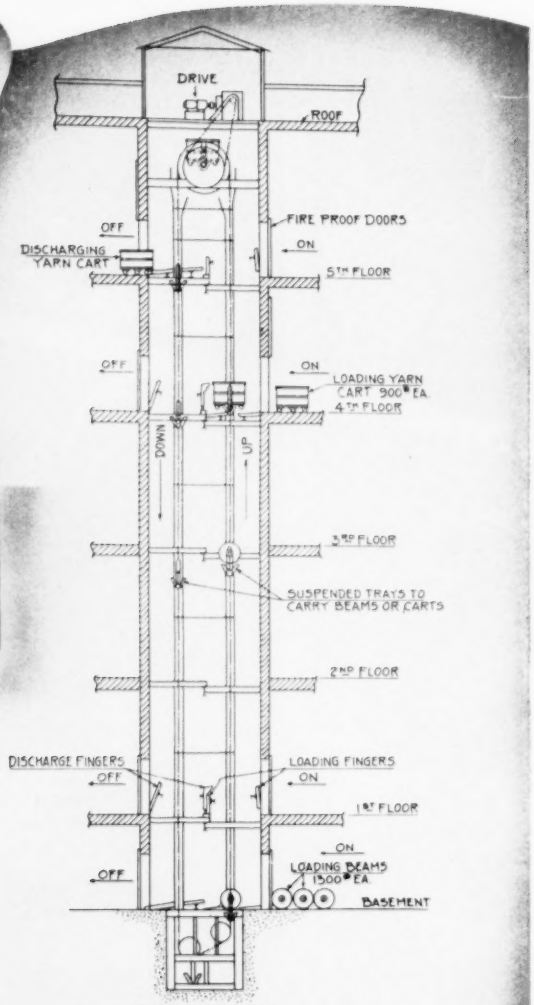
Beam being discharged at predetermined floor



Only through Engineering...
...can efficiency be achieved



Loaded box truck on way to desired floor



TRAY ELEVATOR FOR TEXTILE PLANT

Firestone saves $25,000 a year with this G-W "Ferris Wheel"

Moving 1300-lb. beams of rayon and 900-lb. box trucks in and out of freight elevators is a back-breaking job. Yet approximately 230 of these bulky loads must be lifted (and empties returned) every day at the Firestone Textiles Division of the Firestone Tire and Rubber Co., Gastonia, N. C.

This Gifford-Wood "Ferris Wheel"—a 6-story roundabout tray elevator—has assumed most of the work load. Beams and trucks are automatically picked up on the loading side of a shaftway by trays suspended between two endless chains, carried to the top, eased over the drive sprockets, lowered to the desired floor, and automatically discharged.

The $25,000 annual saving is basically one of reduced labor requirements and improved handling efficiency, and the limited manual work remaining is much less strenuous than formerly.

This is just one of many conveyors born of G-W ingenuity and experience—a product of efficiency through engineering. Call on G-W Materials-Handling Engineers to survey your present methods; you are under no obligation. It might well prove to be a step toward higher profits through lower operating and maintenance costs.

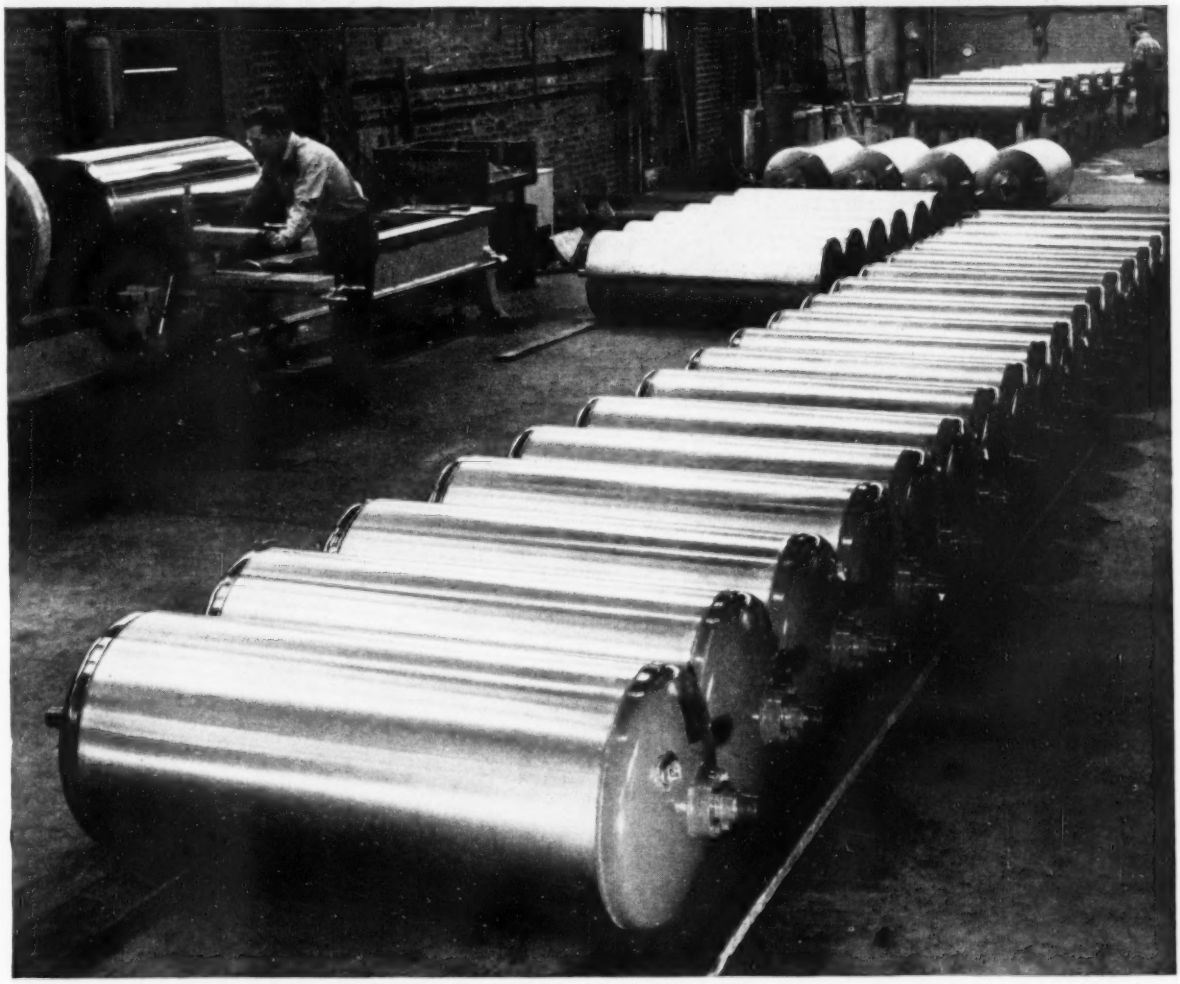
When You Think of Materials Handling—Think of **GIFFORD-WOOD CO.**

Since 1814 • Hudson, New York

NEW YORK 17, N. Y. 420 LEXINGTON AVE. | ST. LOUIS 1, MO. RAILWAY EXCHANGE BLDG. | CHICAGO 6, ILL. 565 W. WASHINGTON ST.

® 8405

They're rolling at Butterworth



Small batteries of cylinders . . . complete drying installations . . . built up to performance and down to a price . . .

In the new Butterworth plant at Bethayres — the most modern unit of its kind for the manufacture of cylinder dryers — we are building complete engineered drying installations as well as small batteries of cylinders.

Production is up . . . costs are down. New precision machinery now in use includes automatic welding equipment for both coded and uncoded cylinders. New manufacturing techniques assure fabricating economies at every step in production.

Butterworth gives you more drying capacity for your money. Each installation is planned to do a specific drying job, taking into consideration weight of cloth, degree of moisture content, dryness desired.

Choice of copper or stainless steel cylinders . . . fabricated or cast-iron columns . . . vertical or horizontal arrangement . . . gear or sprocket and chain drive.

If you are planning increased drying capacity, put it up to Butterworth, makers of fine drying equipment since 1820. Write today.

H. W. BUTTERWORTH & SONS CO.
Bethayres, Pennsylvania

1211 Johnston Building, Charlotte, North Carolina
187 Westminster Street, Providence, Rhode Island.
Machines for Bleaching, Boiling-out, Dyeing, Mercerizing, Finishing and Embossing : : Pot Spinning Machines for Synthetic Fibers : : Calender Rolls : : Tenter Chains

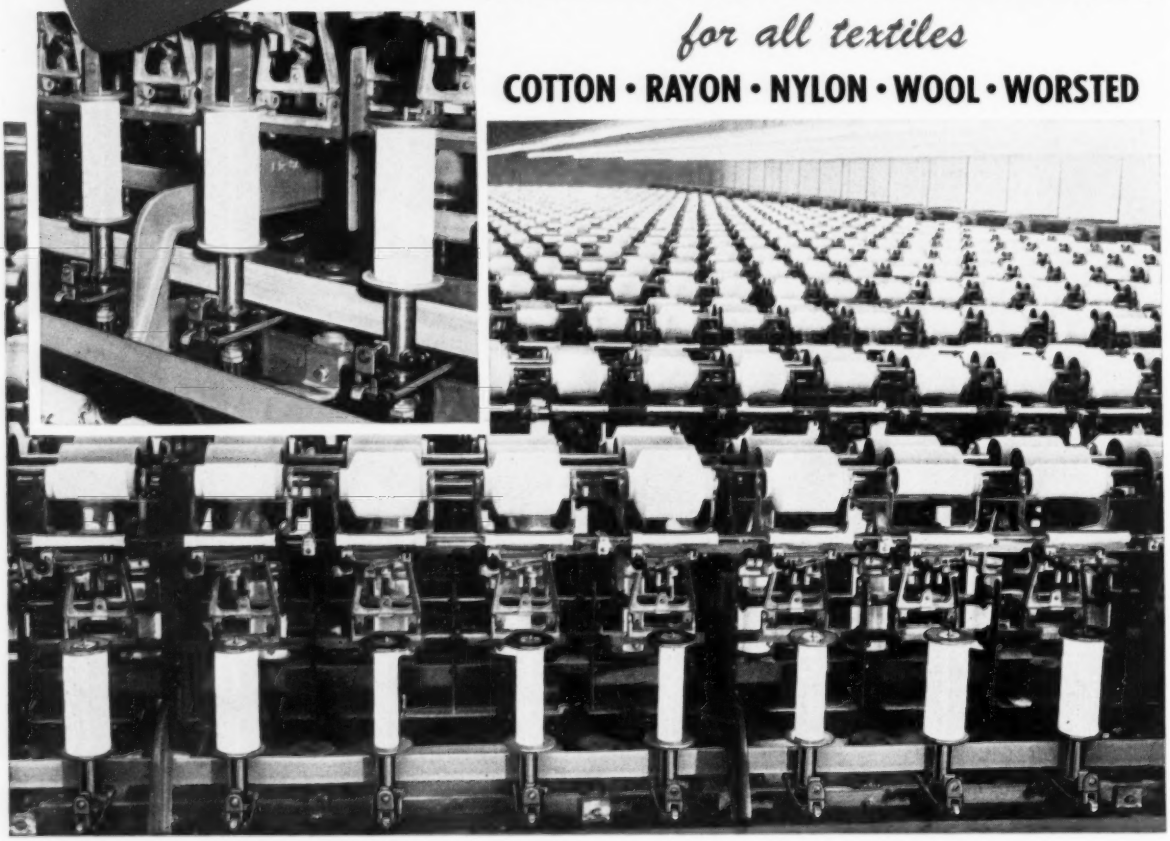
BUTTERWORTH

Marquette ROLLER BEARING SPINDLES

with FULL-FLOATING FOOTSTEP BEARING

for all textiles

COTTON • RAYON • NYLON • WOOL • WORSTED



Starting with a test frame of Marquette Spindles and Brackets in 1946, this company now has more than 200,000 of each in its various mills — producing yarns of highest quality. The spindles are operating with large packages at high speeds, and are showing important savings in power and maintenance costs. The result is *more yarn at lower cost.* We'll be glad to arrange a test installation in *your* mill to prove that you too can get the same advantages from Marquette Roller Bearing Spindles. Contact our home office or one of our representatives.

PROTECTED BY U.S. AND FOREIGN PATENTS AND PATENTS PENDING

The Marquette METAL PRODUCTS COMPANY

CLEVELAND 10, OHIO • SUBSIDIARY OF CURTISS-WRIGHT CORPORATION

Representatives: C. H. WHITE, 2300 ROSWELL AVE., CHARLOTTE, N. C.; WILLIAM F. RUSSELL, BOX 778, ATLANTA, GA.
JOHN J. HALLISSY, 58 LIVINGSTON AVE., LOWELL, MASS.

Also Manufacturers of: HYDRAULIC GOVERNORS • PRECISION PARTS AND ASSEMBLIES • WINDSHIELD WIPERS FOR AIRCRAFT
FUEL OIL PUMPS • FUEL OIL INJECTORS • ROTARY HIGH PRESSURE OIL FIELD PUMPING MACHINERY

News in Brief

Treatment to Upgrade Cotton? Look for patent soon on a new chemical treatment for cotton which will upgrade the stock. Probably will be assigned to one of the industry's research organizations.

Union Fined. The C. I. O. Textile Workers Union has been ordered to pay a Philadelphia textile firm $66,254 for business losses during the nation-wide textile strike in February, 1951. The company, working on contracts for the Army Quartermaster Corps, said the picketing by union members had caused a stoppage of work.

Textiles to Kill Germs? The Permachem Corporation, according to its own and independent laboratory tests, has developed a product and process which imparts disease germ killing properties to textiles of both natural and synthetic fibers. The company is currently negotiating with manufacturers for pilot mill operation to establish large scale production methods to produce materials treated with Permachem at an insignificant increase in cost to the consumer.

Million New Jap Spindles. Almost a million spindles were added to the capacity of Japan's cotton mills during 1952.

Wool Moisture Standards for Trade Use. An ASTM task group has recommended that a figure of 12.0% should be adopted for the moisture content of wool whether scoured only, carbonized and neutralized, neutral noils, top oil or dry combed, yarn-worsted, woolen, or hand knitting. The term moisture content is stated to mean the moisture calculated as a percentage of the weight of the wool in "as is" condition. Representatives of the Boston Wool Trade Association, the Philadelphia Wool Trade Association, the National Association of Wool Manufacturers, and the Carpet Institute have concurred in this recommendation, although excluding wool tops or yarn in any form since wool in this stage comes outside of this group's jurisdiction. In view of the influence of acid content, no standard is recommended for carbonized-only wool at this time by the trade groups.

More Ado About Honeydew. Honeydew in cotton is still causing mills trouble, especially those spinning fine numbers. The sticky substance on fine roving causes layers of roving to hold together, causing breakbacks in spinning. Lowering relative humidity helps.

Expect More Pull Threads in 12 Denier. Full-fashioned hosiery

Vertical Integration

Vertical integration *per se* is not the "open sesame" to assured profits and continuous prosperity in the textile industry. However, many of the leading Carolina textile operators have been able to utilize and to fit a vertically integrated plan into their operations. As a result, they have been able to build organizations which are equipped to meet the needs of the current market and are flexible enough to move in harmony with changing market requirements.

The foregoing conclusions were arrived at in a thesis by Dr. Robert Hartzell Cole of the University of North Carolina, Chapel Hill, whose subject was, "Marketing Aspects of Vertical Integration in the Textile Industry." Particular reference to the Carolina industry is contained in the thesis, available from the library at UNC.

Other findings included in the thesis are:

(1) The vertical form of organization has permitted in many instances a higher level of profits, the use of brand names, products of higher quality, lower prices to consumers, and more effective control.

(2) Firms which have combined spinning, weaving, and finishing and are operating their own selling organizations have been able to present a more desirable profit trend than have those concerns which have combined the manufacture of garments with the retailing of these products to the final consumer.

(3) The form of organization selected to meet changing market needs must provide as much flexibility as possible. Those with a ready-made knowledge of how to provide the market with what is demanded have been and will continue to be in a preferred position to integrate either backward or forward or perhaps in both directions simultaneously and to make a success of their undertaking.

RESISTS CRUSHING

A.P.T. Loom Bobbins built to resist build-up pressures of synthetic yarns

American Paper Tube Co.

ESTABLISHED 1898
WOONSOCKET, R. I.
GREENVILLE S. C.

HUGH WILLIAMS & CO., TORONTO, CANADA

PROPERTIES OF A.P.T. ALL-PURPOSE BOBBINS

Incorporated in A.P.T. laminated-impregnated bobbins are all of the characteristics of: ideal yarn retention and delivery, crush-resistance, heat- and moisture-resistance needed for the varying requirements of HARD-TWIST NYLON, SOFT-TWIST YARNS, LOW-TWIST ACETATE, CONDITIONING TREATMENT

53 YEARS OF RESPONSIBILITY FOR EFFICIENT AND ECONOMICAL CARRIER SERVICE

Between the Cotton and the Cloth

(A Message to Avondale's Suppliers)

Somewhere in a Southern field raw cotton grows. Sometime soon it leaves a mill, turned into useful fabric. And in between . . .?

There's the work of human hands, of course, and the guidance of human minds. But these alone can't make our products. Machines and parts and supplies of a hundred kinds go into these products too.

At Avondale, we are always aware that our business, and the businesses of our suppliers, are as closely interwoven as a piece of good cotton cloth. From raw material to starch for sizing . . . from machines to the oils that keep them running . . . we are just as dependent on the things we buy as on the things we sell.

Equipment and materials from other businesses come to us conscientiously produced, sound in quality and performance. We try to use them honestly, wisely and expediently. For with good equipment properly put to work, the job is easier and the product better.

There is a famous part of Avondale's Creed which says:

The function of industry is to take certain things that grow on the surface of the earth, or are buried beneath the surface, and convert them into sizes, shapes and colors that the public wants; and to do this at the lowest possible cost, without any exploitation along the route.

This cannot be done without co-operation of many sorts. For the special co-operation our suppliers have given, we are specially appreciative. The right kind of tools in the hands of the right kind of people can't help but turn out the right kind of goods.—*Annual Report of Avondale Mills of Alabama.*

News in Brief

mills are finding that pull threads and menders in hosiery of 12 denier nylon are nearly twice as high as hosiery made of 15 denier on the same gauge. Stockings made of crinkle yarn pick and pull even more—on the smallest rough surface. Intensified campaigns to eliminate all rough surfaces which the hosiery contacts and to educate operatives in keeping hands smooth pay real dividends.

Flameproof Cotton Fabrics. The U. S. Department of Agriculture has announced the development of improved flameproofed cotton fabrics, using a chemical known as THPC, or tetrakis (hydroxymethyl) phosphonium chloride. THPC applied to cotton fabrics by conventional methods of processing gave these fabrics excellent flameproofing qualities at the Southern Regional Research Laboratory in New Orleans. Wilson A. Reeves and John D. Guthrie, of the Laboratory's Cotton Chemical Processing Division, developed the new process.

Employee Injuries at Home. More employees were injured away from their jobs in January than were injured in the 12 months of 1952 on their jobs in Du Pont plants and laboratories all over the country, according to the company. Officials of the company made an actual count of off-the-job lost-time injuries in January. The report disclosed that 144 had been hurt away from work, and the total for all of 1952 at work came to only 86. More than 76,000 men and women work in Du Pont plants and laboratories across the nation.

New Textile Course at Lowell. A new course at Lowell Textile Institute is to be known as "Textile and Fashion Design Option." The course is to combine the designing of fabrics and their application in fashions.

New Mills in Turkey. Six new cotton mills are being built by private firms in the Istanbul district of Turkey. They are Eyup, Topkapi, Ortakby, Ferikoy, and two mills by Balirkoy. Two new woolen mills are being built by Kurtulus and Rami.

Approved Floor Finishes. Designed to give users the benefit of extensive research carried on since the last specifications were issued three years ago, a revised list of MFMA approved floor finishing products is now available free to the general public. Requests should be directed to the Research Department, Maple Flooring Manufacturers Association, 35 East Wacker Drive, Chicago 1, Illinois.

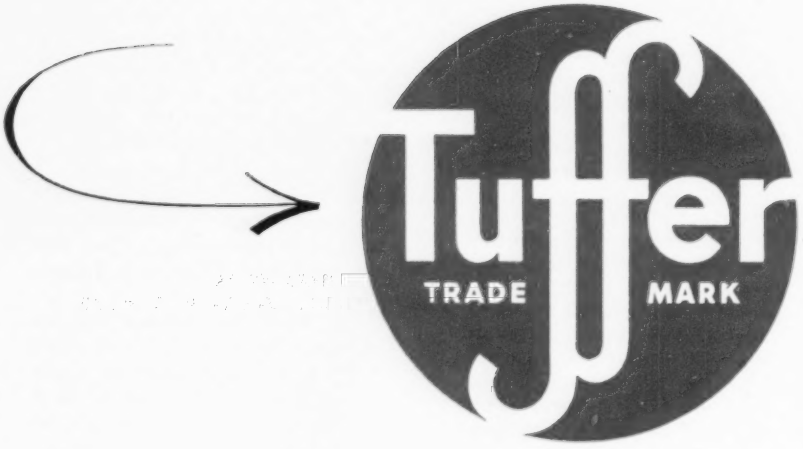
Big Year for Coated Fabrics. The manufacturers of vinyl-coated fabric and vinyl sheeting registered their biggest year in 1952, according to figures released by the Plastic Coatings and Film Association. Shipments of vinyl sheeting were up 16.7 per cent over 1951, and vinyl-coated fabric shipments showed a gain of 13.4 per cent.

Research Conference. George S. Buck, Jr., of the National Cotton Council will serve as chairman of the 1953 Gordon Research Conference on Textiles to be held at Colby Junior College, New London, N. H., July 13-17. Information about the conference can be had by addressing W. George Parks, director, Department of Chemistry, University of Rhode Island, Kingston, R. I.

Poor Little Rhode Island. Textile manufacturers in Pawtucket, R. I., have recently learned the sad facts of life about their relationships with the community. Tax assessments have been upped $7 per 1000. It is becoming increasingly evident, according to owners, that mills are being intentionally forced out of the area in favor of diversified manufacturing by small "skill" shops which can absorb the expenses of legislated employee benefits and high taxation.

for more production

specify



CARD CLOTHING

Maximum output from your card room depends to a large degree upon the selection of the proper Card Clothing, the correct size of wire, proper foundation and the right know-how of operating speeds and settings.

Make sure you start with the right Card Clothing — TUFFER of course. Every type made, from the coarsest wire to the finest—in any foundation you specify—is available at the home of TUFFER.

Team up your operating skill with TUFFER Card Clothing quality to get the most your cards can produce.

TUFFER PRODUCTS

Card Clothing for Woolen, Worsted, Cotton, Asbestos and Silk Cards • Napper Clothing, Brush Clothing, Strickles, Emery Fillets. Top Flats Re-covered and extra sets loaned at all plants. Lickerins and Garnet Cylinders from 4 to 30 inches and Metallic Card Breasts Rewired at Southern Plant • Midgley Patented, and Howard's Special Hand Stripping Cards • Top Flat Chains

HOWARD BROS.

A-4

WORCESTER 8, MASSACHUSETTS

Southern Plants: Atlanta, Ga. and Gastonia, N. C.
Branch: Philadelphia, Pa. *Direct Representation in Canada*

Burry Wools Under Study. A survey has been proposed of the use of such trade terms pertaining to vegetable matter content of wool as: free or practically free; some or few burr; burry; free or nearly free; light burr; c - up to 6% burr; d - up to 10% burr. The purpose of the survey is eventually to set standards for acceptance or rejection of a lot of wool in terms of conformance to properly established use of these trade terms. This is to be set up for carpet wools and apparel wools.

Sock Mystery Solved. The arrest of two juveniles and four men cleared up the mystery of how 9000 dozen pairs of socks, valued at $100,000, disappeared from a West Virginia mill. Two of the men and the juveniles pleaded guilty to petty larceny, and the other two men pleaded guilty to receiving stolen goods. The merchandise was stolen throughout last year.

Mexican and Spanish Trade. Mexican industrialists recently visited Madrid for talks with Spanish interests to see if trade could be increased between the two countries. Mexico hopes to insure a regular outlet for cotton and sisal in Spain.

Dry Cleaning Study. A. E. Johnson of the National Institute of Cleaning and Dyeing reported for the AATCC subcommittee on dry cleaning that work is underway on a method for predicting the behavior to dry cleaning of printed fabrics, particularly flock prints and overprints. A standard method is expected to be available this year. The subcommittee on dimensional changes is now ready with a method to determine the shrinkage of wool knitted fabrics, other than hosiery. This latter method has been submitted for the approval of the General Research Committee.

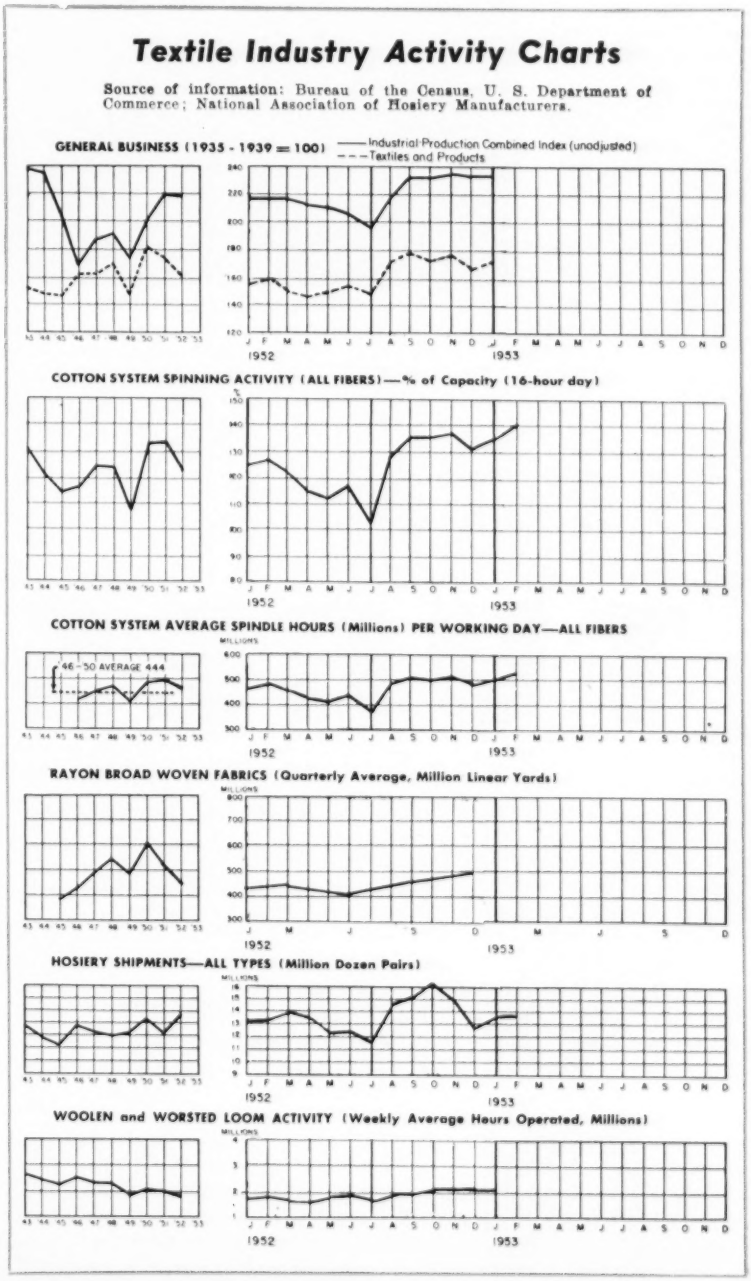
Note for Users of Induction and Dielectric Heat. Users of induction and dielectric heating equipment made prior to June 15, 1947, should note FCC rules requiring certification, on or before June 30, 1952, of compliance with minimum radiation requirements for all equipment installed or manufactured prior to July 1, 1947. It is suggested that users of older type equipment contact the manufacturer or a consulting engineer for guidance in complying with the rules.

Cotton Promotion in Europe. Representatives of the National Cotton Council will meet with cotton textile leaders in Europe during May to lay plans for cotton promotion programs designed to increase cotton consumption in West European areas. Ed Lipscomb, Council sales promotion director, will confer with representatives from England, **France,**

(Continued on page 207)

Textile Industry Activity Charts

Source of information: Bureau of the Census, U. S. Department of Commerce; National Association of Hosiery Manufacturers.


GENERAL BUSINESS (1935 - 1939 = 100)
Industrial Production Combined Index (unadjusted)
Textiles and Products
COTTON SYSTEM SPINNING ACTIVITY (ALL FIBERS)—% of Capacity (16-hour day)
COTTON SYSTEM AVERAGE SPINDLE HOURS (Millions) PER WORKING DAY—ALL FIBERS
46-50 AVERAGE 444
RAYON BROAD WOVEN FABRICS (Quarterly Average, Million Linear Yards)
HOSIERY SHIPMENTS—ALL TYPES (Million Dozen Pairs)
WOOLEN and WORSTED LOOM ACTIVITY (Weekly Average Hours Operated, Millions)
1952
1953

SERVING THE TEXTILE INDUSTRY SINCE 1899

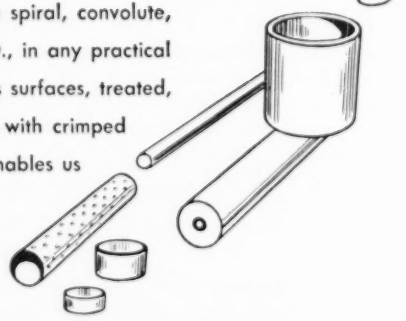
- Yarn Tubes
- Cloth Tubes
- Loom Tubes
- Ball Warp Cores
- Pencil Tubes
- Thread Bobbins
- Underclearer Covers
- Tie-in Tubes
- Roving Tubes
- Topping Roll Covers
- Loom Beam Repair Tubes
- Cheese Cores
- Twister Tubes
- Narrow Fabric Tubes

SONOCO TUBES

Precision Paper Products

For Every Textile Need . . .

Sonoco's vast tube manufacturing facilities produce spiral, convolute, parallel or drawn tubes in sizes from ⅛" to 36" I.D., in any practical length or wall thickness. Available in colors, various surfaces, treated, impregnated, perforated, scored, notched, printed, with crimped or burnished ends. Our 50 years' experience enables us to help you with any problem that can be solved with a paper tube.



sonoco
PAPER CARRIERS
REG. U.S. PAT. OFF.

SONOCO PRODUCTS COMPANY

MAIN OFFICE—HARTSVILLE, S. C.

MYSTIC, CONN. LOS ANGELES, CAL. BRANTFORD, ONT.
PHILADELPHIA, PA. GARWOOD, N. J. LOWELL, MASS. GRANBY, QUE.

DEPENDABLE SOURCE OF SUPPLY

AN EXECUTIVE Views

THE NEWS IN TEXTILES

Prepared by a man who is closely identified with the textile industry.

WHATEVER became of the idea about providing a better packaging deal for cotton? For years, in fact until the mind of man runneth not to the contrary, cotton bales have been incased in a tattered remnant of burlap bagging which looked like somebody's fishing net after a shark had been through it several times. On top of this were steel bale ties which generally were either rusty or dripping with an asphalt coated paint which stained the lint. Unfortunately, that is still the way a bale of cotton looks.

Not only has the bale of cotton been unattractive but it has also reached the mill in such a soiled condition that many problems have arisen. European manufacturers have been complaining about this situation for a long time. American manufacturers have complained spasmodically, but they are now coming to the realization that "tar spots" and other such damage can only be cured when a proper package is developed for the cotton bale.

For a number of years there has been much talk of such an improved package but very little seems to have been done thus far. Rumors in the trade have it that the Institute of Textile Technology at Charlottesville, Virginia, has done research on this question, and in cooperation with the Fulton Bag & Cotton Mills, Atlanta, Georgia, have developed some sort of laminated paper covering which is backed up by a coarse grade of cotton goods.

It seems the idea is to cover the entire bale with this paper-and-cloth covering so that oil, dirt, grease, tar, etc., cannot reach the lint. Experiments have also been made, we understand, to develop an aluminum tie which might be substituted for the steel tie now being used.

Naturally, covering the entire bale with paper or any other material creates certain problems. For example, how are you going to get to the bale to sample it? It has been suggested that one or two "windows" be left in this covering so that the classer could get to the cotton. Perhaps an even more serious problem is what to do about the weight of the bale.

Rule 35 of Southern Mill Rules provides that the tare on uncompressed cotton shall not exceed 4.4 per cent and the tare on compressed cotton shall not exceed 4.8 per cent. The mills are now paying for the jute bagging and the steel ties around each bale, and if the weight of these is going to be changed, somebody somewhere along the line is going to howl about prices and costs.

However, as difficult as some of these problems may seem they are no excuse for a failure to develop a better package for cotton. Almost invariably, foreign manufacturers comment upon the fact that cotton reaching them from the United States is in a shameful condition. Mills in this country are becoming more and more prone to compare the sort of package cotton reaches them in with the package which contains synthetics. There has been a lot of talk about a better package for cotton, but there has been very little action. The time has now come when action is definitely needed. We would certainly like to see it forthcoming.

New Cotton Standards

Speaking of raw cotton reminds us to remind you that on August 15 the new government standards will go into effect for American upland cotton. These standards are determined by the United States Department of Agriculture after "consultation" with growers, shippers, manufacturers, and others. Conferences are also held with foreign manufacturers.

Some months ago, when the question first came up of changing the standards, American mill men protested vigorously to the Department of Agriculture, because they felt that there had been a gradual lowering of standards for many years and that in the final analysis this would hurt cotton's competitive position. Over these protests, the Department recently announced that new standards would go into effect August 15.

American mill men argued that changing cotton standards was very much like changing the number of inches in a yard. They contended that when you bought a yard of cloth you expected to get 36 inches and you did not expect any government agency suddenly to change the yard measure to 30 inches. The Department's reply was that the new standards which were being established would more nearly reflect the condition of the present-day crop.

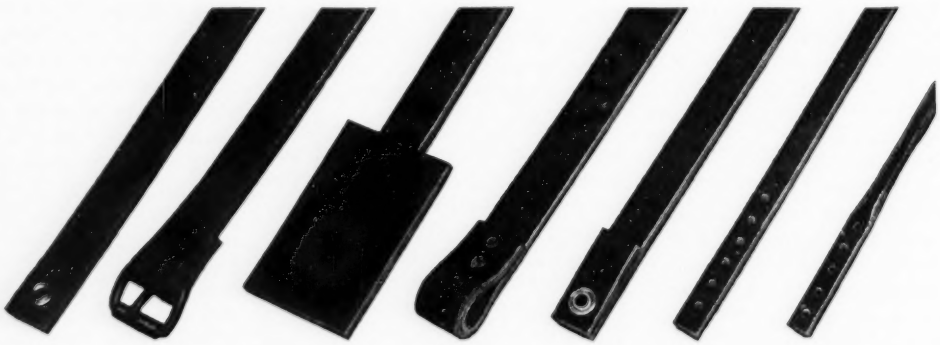
At the root of all of this trouble, it seems to us, is the law or the administrative ruling which specifies that American mill men, who consume something like two-thirds of the American cotton crop, have no voice in determining the standards of their raw product. In-

JACOBS ENGINEERED

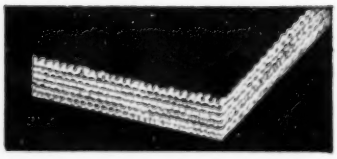
Rubberized Fabric Straps

STEP UP LOOM PRODUCTION

The JACOBS line of rubberized fabric loom strapping is unequalled for strength, long life, and resistance to oil and heat. We can still offer immediate delivery in any width or shape. Why not order now for your immediate needs and anticipated requirements?



AN ENGINEERED PRODUCT:
Pre-stretched and treated for flexibility. Uniform in thickness. Requires a minimum of adjustment.



Immediate delivery in any width or shape

THE BULLARD CLARK CO.

JACOBS

SOUTHERN DIVISION
Charlotte, N. C.

NORTHERN DIVISION
Danielson, Conn.

stead, the United States Department of Agriculture reserves to itself a 51 per cent vote and gives to foreign mill men a 49 per cent vote. The disenfranchised textile man in this country can thus do nothing but protest. He cannot vote.

It seems to us that we should appeal to Congress to remedy this situation.

End of Price Controls

A few weeks ago the Office of Price Stabilization lifted the last of the remaining consumer commodity price controls. For the majority of Americans, this ended—we hope for all time—a period in which government planners tried to stop the kettle from boiling by holding down the lid. Apparently, they never thought about turning off the heat.

At about the time these controls were going out of existence, OPS had the temerity to appear before Congress and ask for some thousands of dollars for the preparation of a "history" of the Office of Price Stabilization. This history would, of course, be written by OPS personnel, and it is not difficult to come to the conclusion that it would turn out to be a highly favorable document. Social planners seem to have more lives than a cat, and when they have been obliterated in one place they seem to rise again in another.

We do not need any history of OPS written by OPS personnel. What we do need, however, is an objective statistical picture of what happened to prices after price controls were taken off. The Roosevelt-Truman boys always contended that if you took price ceilings off, prices would skyrocket and the housewife would raise such a commotion that, politically, life would become untenable. Now is the time to find out whether or not they were right.

Did prices skyrocket? Some organization can do the country a great service by making such a study now while the subject is more or less fresh in the minds of all of us. Price controls are not dead, they are only sleeping.

Are there any volunteers to make such a price study? The line will form to the left.

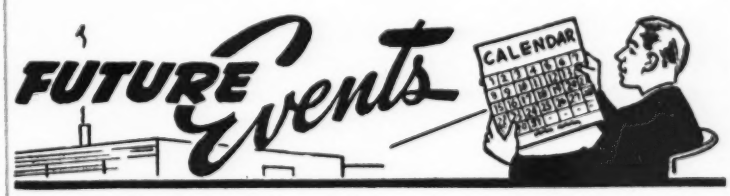
Stand-by Controls

While talking about price controls, we should also make some sort of brief mention of so-called "stand-by controls." There has long been a theory in certain sections of Congress, as well as in certain sections of our economy, that in times as unsettled and turbulent as these we should have some sort of price control program ready so that it could be placed in effect on a moment's notice.

This push-button program has considerable popular appeal be-

(Continued on page 229)

AN EXECUTIVE *Views* THE NEWS IN TEXTILES



May 7-8—Fifth Occupational Vision Congress, sponsored by Southern Occupational Vision Council in cooperation with Georgia Institute of Technology, Georgia Tech Campus, Atlanta, Ga.

May 7-9—50th anniversary convention, Phi Psi Textile Fraternity, Penn-Sheraton Hotel, Philadelphia, Pa. Hosts: Philadelphia Textile Institute and Philadelphia Alumni Chapter.

May 18-22—Materials Handling Exposition, Convention Hall, Philadelphia, Pa.

May 22—Spring meeting, Textile Engineering Div., The American Society of Mechanical Engineers, Sheraton Plaza Hotel, Boston, Mass.

May 25-30—Annual conference, Textile Institute, Llandudno, North Wales.

May 27-29—Meeting, American Society for Quality Control, Textile Div., Convention Hall, Philadelphia Pa.

May 28-30—Annual convention, South Carolina Textile Manufacturers Association, The Cloister, Sea Island, Ga.

June 15-19—Exposition of Basic Materials for Industry, Grand Central Palace, New York, N. Y.

June 18-19—Chattanooga Yarn Association annual outing, Lookout Mountain Hotel, Chattanooga, Tenn.

June 18-20—Annual meeting, Southern Textile Association, Mayview Manor, Blowing Rock, N. C.

June 29-July 3—Annual meeting, American Society for Testing Materials, Atlantic City, N. J.

July 13-17—Gordon Research Conference on Textiles, sponsored by American Association for the Advancement of Science, Colby Junior College, New London, N. H.

July 27-31—International Exposition of Fabrics, Fibers, Finishes, and Yarns, Waldorf Astoria Hotel, New York City.

Sept. 10-11—Fall meeting, The Fiber Society, Lowell, Mass.

Sept. 17-19—Annual national convention, American Association of Textile Chemists and Colorists, Conrad Hilton Hotel, Chicago, Ill.

Oct. 1-2—Annual convention, Quartermaster Association, Lord Baltimore Hotel, Baltimore, Md.

Oct. 12-14—Annual forum, Packaging Institute, Hotel Statler, New York, N. Y.

Oct. 14-22—"Textile Recorder" International Exhibition of Textile Machinery and Accessories, Belle Vue, Manchester, England.

Oct. 15-16—47th annual meeting North Carolina Textile Manufacturers' Association, Carolina Hotel, Pinehurst, N. C.

Nov. 12-13—Annual meeting, Textile Research Institute, Commodore Hotel, New York, N. Y.

1954

April 22-24—Annual convention, American Cotton Manufacturers Institute, Jung Hotel, New Orleans, La.

April 26-30—American Textile Machinery Exhibition (sponsored by American Textile Machinery Association), Atlantic City (N. J.) Auditorium.

Oct. 4-9—18th Southern Textile Exposition, Textile Hall, Greenville, S. C.

Your Packing Problem Could Be Gaylord's Next Success Story!

Extra weight to hold . . . odd shapes to pack . . . complicated construction and dozens of other unusual requirements . . . seldom stump the experts of Gaylord's Research and Engineering Division. In hundreds of ways they have designed corrugated and solid fibre containers to save packing time, shipping money and protect products better.

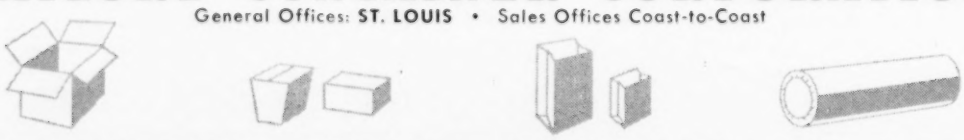
Gaylord packaging engineers never say "can't"! For information and cooperation, phone your nearest Gaylord office. It's listed in the classified section of your phone book, under Boxes (Gaylord).

Gaylord Boxes

Their unseen quality gives you an extra margin of safety.

GAYLORD CONTAINER CORPORATION

General Offices: ST. LOUIS • Sales Offices Coast-to-Coast



CORRUGATED AND SOLID FIBRE BOXES • FOLDING CARTONS • KRAFT BAGS AND SACKS • KRAFT PAPER AND SPECIALTIES

NEW Equipment AND MATERIALS

Loom Cloth Roll Mechanism Saves Time and Labor

A recently patented method for holding and removing cloth rolls on looms eliminates the conventional train of gears, shaft, and springs and, according to the inventor, saves time and labor in the cloth doffing operation.

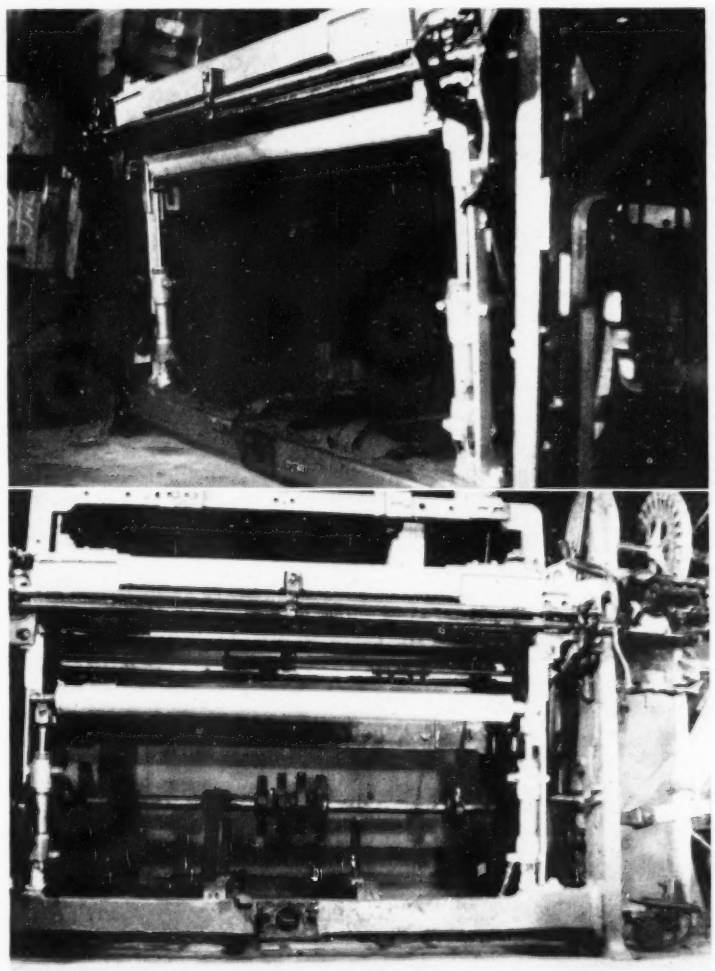
The cloth roll rests in ball bearings mounted on rods actuated by either pneumatic or hydraulic cylinders. Cylinders on each side of the loom are connected by a single pipe-line so that pressure on both ends of the cloth roll will be the same, thereby preventing the production of slack-sided cloth.

Cloth can be removed from the loom in about one-half the time required with conventional arrangements.

H. L. Canup, Troy, N. C.

For additional data, request item E-114, using Handy Return Card on page 206.

Two views of loom fitted with hydraulic cloth roll mechanism.



Battery-Operated Roll Cleaner

A mobile battery-operated cleaning machine clears waste from drafting rolls and other parts on ring frames, fly frames, and combers.

The device is mounted on a trolley and can be wheeled from station to station in the processing room. As it is completely self-contained, there are no trailing wires to hinder its movement.

The tapered rotating spindle is provided with a hand-grip for the operator, and on being directed to the waste it immediately picks up the fibers and enables the operative to reach places which would otherwise be inaccessible or which would be dangerous while the machine is in motion.

On the comber the device can be used for removing waste at the detaching roll ends and at the rear of the comber at the brush and cylinder position. On ring frames the cleaning spindle will speedily remove all waste collections from roll and apron drafting systems, while on the fly frames it will clear waste collections on the bobbin and spindle gearing.

Farnworth Engineering Co. Ltd., Emlyn St., Farnworth, Near Bolton, Lancashire, England.

For additional data, request item E-120, using Handy Return Card on page 206.

Permits exact quality control of yarn, roving or sliver

THE CHART RECORDS made by the Brush Uniformity Analyzer* provide a *numerical evaluation* of the uniformity of the material. This eliminates guesswork and helps you control quality exactly.

With this instrument, originally designed by the Institute of Textile Technology, you can grade yarn, roving or sliver at high speeds. Checking a 1000-foot sample takes little more than three minutes, a fraction of the time required by other methods.

The charts are available immediately and provide a permanent record of tests. In addition, the average cotton count or the average percentage non-uniformity is shown on the meter.

A staff of textile-trained engineers is available to assist you in application, service, and evaluation of data. In southeastern states our representative is W. A. Brown and Associates. For complete information, write Brush Electronics Company, Dept. T-5, 3405 Perkins Avenue, Cleveland 14, Ohio.

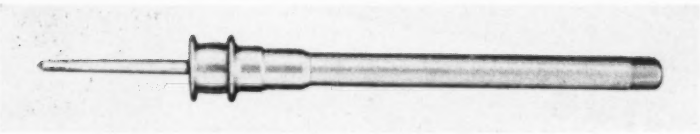
*Trademark

This sample chart of roving indicates gross deviation from nominal weight per unit length. The chart indicates irregularities as short as ½ inch in a length of yarn.

BRUSH ELECTRONICS COMPANY

formerly
The Brush Development Co.
Brush Electronics Company is an operating unit of Clevite Corporation.

INDUSTRIAL AND RESEARCH INSTRUMENTS
PIEZOELECTRIC MATERIALS • ACOUSTIC DEVICES
MAGNETIC RECORDING EQUIPMENT
ULTRASONIC EQUIPMENT



Hartford spindle adaptor for paper or plastic tubes.

NEW Equipment AND MATERIALS

Spindle Adaptor Features Two-Stage Conversion

The benefits of unique, two-stage conversion are offered by the new Hartford Spindle Adaptor for paper or plastic tubes.

For the first stage this adaptor enables a mill to use existing spindle blades. Onto these are mounted the adaptor, consisting of a new chrome-plated steel whorl, which gives unusual protection at the major wear point, and an aluminum barrel surmounted by a cap, or seat, of steel to retard wear at that point.

With the adaptor a mill can convert spinning, twisting or special duty spindles from wood-bobbin service to service with all types of paper or plastic tubes, regardless of the make of spindle now in use.

Because of the adaptor's design, plus its long-life construction, it is possible for a mill to make a second conversion at a later date. This feature prevents obsolescence. When the time comes that a mill wishes to improve its spindles further, the adaptors are returned to the Hartford Machine Screw Company, which removes the old blades and attaches either their ball bearing or roller bearing anti-friction running gear. This second adaptation is very simple, because the whorl is so designed that it also fits the Hartford anti-friction running gear.

The Hartford Machine Screw Company, Hartford, Conn.

For additional data, request item E-117, using Handy Return Card on page 206.

30-Section Full-Fashioned Knitter Operates at 100 Courses per Minute

Chief among the developments that allow the new "Reading" 100 full-fashioned hosiery knitting machine to operate at a speed of 100 courses per minute is the newly designed cam motion. This cam motion is such that the path of the needle during loop-forming and narrowing is considerably smoother and devoid of sharp changes in direction of travel, thus eliminating all unnecessary movement.

Needles having a slightly shorter and differently shaped beard contribute a great deal to the increased speed of the loop-forming action. Other improvements are:

Re-designed sinkers and dividers with shorter and newly shaped sinker noses and throats. All sinkers are provided with an accurately formed recess at the front of the upper edge to prevent carrier tubes from "leaning" against the sinkers and causing needle breakage. This also means that the carrier tubes can rest extremely low without damaging the sinkers.

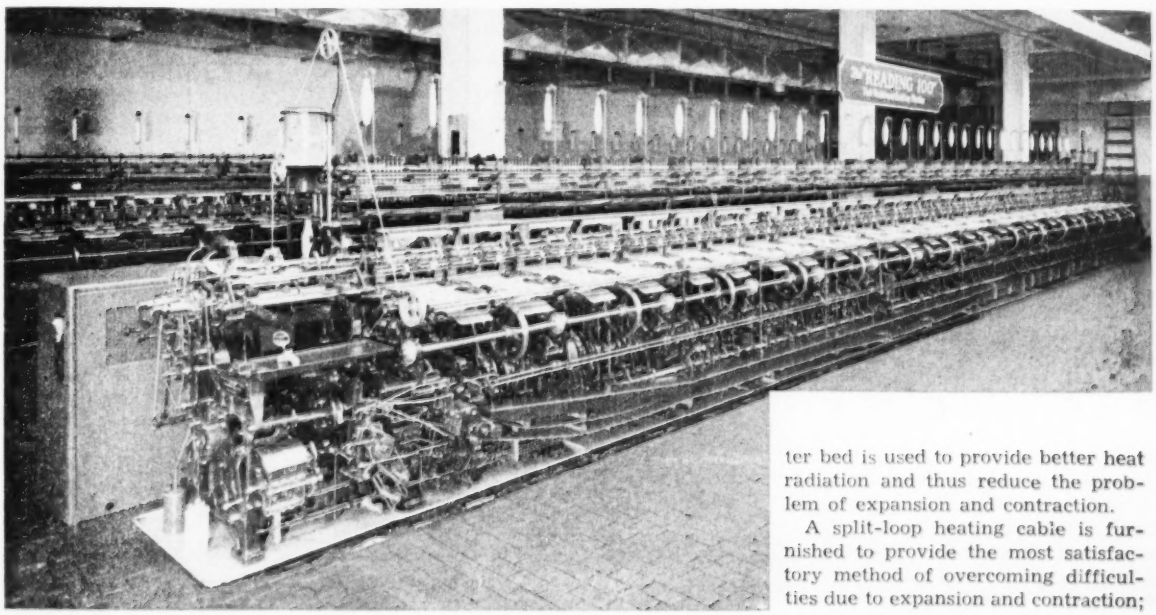
Front catchbar and knockover bit shafts are increased in diameter to reduce torque and sag.

Newly developed camshaft operated catchbar safety provides positive protection against damage to slurcam box housings, jacks, jack beds, sinker heads, and verge plates.

A strengthened and perforated center bed is used to provide better heat radiation and thus reduce the problem of expansion and contraction.

A split-loop heating cable is furnished to provide the most satisfactory method of overcoming difficulties due to expansion and contraction;

"Reading 100" full-fashioned hosiery knitting machine (Textile Machine Works).



MILL OPERATING REPORT
ON CLEANING COTTON WITH AIR
#2

To further compare conventional cleaning machinery with Super-Jet cleaning, some strict good ordinary cotton, containing 8.4% trash as shown by a Shirley Analyzer, was put through a vertical opener and a Buckley opener, after which, 6.4% trash remained in the cotton.

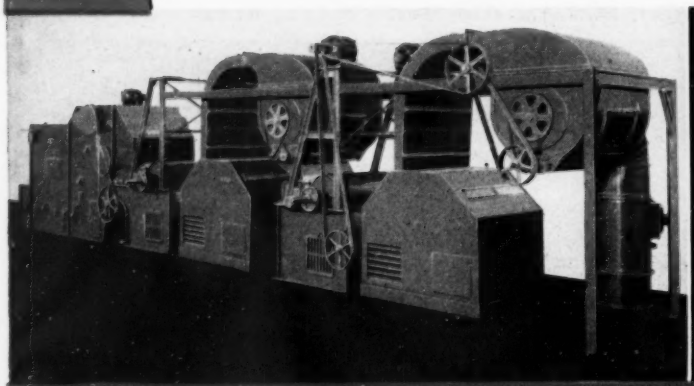
This cotton was then put through a Tandem Super-Jet System, and then only 3.0% trash remained in the stock.

The Super-Jet System therefore removed 70% more trash than the conventional machines, and took it out after those machines had partially cleaned this cotton.

Furthermore, the waste from the conventional machines contained 34% fiber, 3.8% of which was of staple length; while the Super-Jet waste contained 15% fiber, 1.1% of which was staple length.

The Super-Jet waste contains from two to three times the quantity of motes removed by the conventional machines.

If you would like to visit a mill where results comparable to these are being obtained, we will gladly arrange it for you.



TANDEM
Super-Jet
CLEANS ENTIRELY WITH AIR

ALDRICH-LUMMUS CLEANING SYSTEM

Made by LUMMUS COTTON GIN CO. Columbus, Ga. and ALDRICH MACHINE WORKS Greenwood, S. C.

Sold and Installed by AldricH MachinE Greenwood WorkS South Carolina

for bringing the machine up to operating temperature before starting or to maintain such temperature over shutdown periods of short duration; and to do this automatically through the use of a pre-set thermostat.

Improved balancing cam action is built into the machine, which "smooths out" the normal intermittent light and heavy loads on the camshaft to a degree never before achieved.

Double "Oilite" bushings in all oscillating shaft bearings reduce the required frequency of lubrication and provide a more satisfactory bearing surface for these shafts.

The automatic speed selector is controlled by a chain similar to that of the main pattern chain, providing unlimited stations for making speed changes throughout the knitting of the blank.

Made in 30 sections, the machine is available in both 60- and 66-gauge and equipped with improved center lace, three-carrier alternating, and double spindle reinforced selvage attachments.

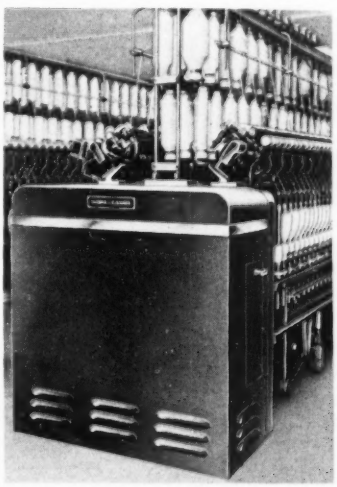
Textile Machine Works, Reading, Pa.

For additional data, request item E-501, using Handy Return Card on page 206.

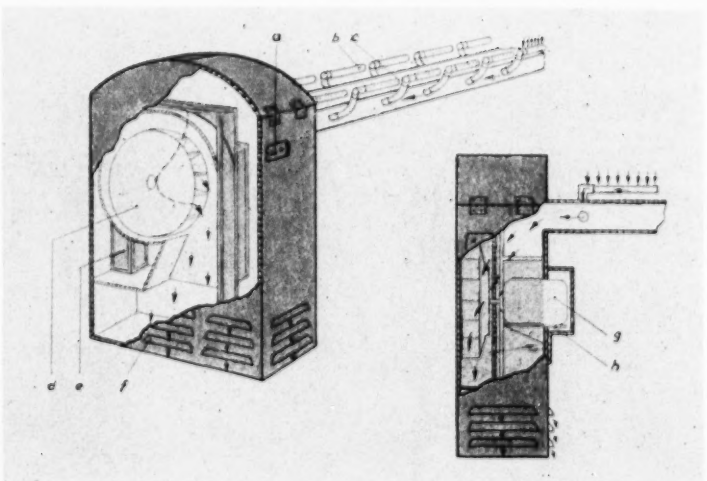
Broken End Collector Saves Spinner's Time, Increases Production

A 30 per cent saving in spinning frame operatives' time and increase in spinning frame production of from 5 to 15 per cent per frame per shift on average counts are principal advantages to be derived from installation of the Thoma Cleaner, a pneumatic broken end collector manufactured by the Thoma Co. of Zurich, Switzerland, and now available through an agent in the United States.

Suitable for practically all kinds of fibers including cotton, wool, synthetics, ramie, horse and goat hair, the pneumatic cleaner system also provides these benefits: fewer ends down; fibers accumulated in filter box are ready for re-use; elimination of scavenger rolls; constant extraction of dust and fly from room through filter box.



SPINNING FRAME equipped with the Thoma Cleaner is shown in photo at right. Below are sectional drawings illustrating principle of operation. Legend: a, push button switch; b, suction tube; c, main duct; d, fan; e, filter; f, exhaust air outlets; g, motor; h, motor bracket.



The cleaner fan is coupled directly with the motor shaft, the motor being located in the suction air current. With this arrangement, the motor is continually cooled, providing maximum fan efficiency. Power consumption is low.

Wherever possible, the central duct is installed under the roller beam in order to avoid elevation of the creel. Central duct enters directly into filter box, and elimination of curved connecting duct increases efficiency of suction.

If space limitations prevent placing filter box on floor, it can be fitted into the creel without losing production from one spindle—it is only necessary to set apart five or six bobbins to obtain necessary space for mounting box.

Stellite American Corp., 60 East 42nd St., New York 17, N. Y.

For additional data, request item E-103, using Handy Return Card on page 206.

Roving Frame Shipper Rod Makes Jogging Easy

The shipper-rod assembly with which new Saco-Lowell roving frames are equipped and which can be applied to existing frames without alterations or expensive machining operations, is a light-weight, rapid-action, and accurately functioning assembly.

Located above the roller beam approximately in line with the front end of the clearer and running the length of the frame, it does not interfere with passage of sliver. Spotted on this rod are black plastic handles conveniently located so that one is always in reach.

An easy turn of the wrist controls the entire movement of the switch, so that it is now possible to jog the frame easily and accurately when putting up ends or getting ready to doff.

Safety lock prevents operation of switch when changing gears or doing other work around frame.

Saco-Lowell Shops, 60 Batterymarch St., Boston, Mass.

For additional data, request item E-104, using Handy Return Card on page 206.

(Continued on page 213)

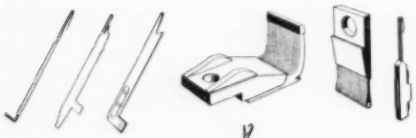
"Charts and Diagrams," which formerly appeared on this page, now begins on page 4.

STRAIGHT AND TRUE . . . From the selection of special steels, through all processes of manufacturing, automatic and electronic controls govern the precision development of Textile Spring-Beard Needles. Result — straight, true needles that help you produce finer fabrics at lower costs. You'll find a big difference in improved high-speed knitting when your machines are equipped with Textile Spring-Beard Needles.

TEXTILE MACHINE WORKS, READING, PENNA.

Textile
SPRING-BEARD NEEDLES

For Full-Fashioned Knitting
For Tricot Knitting



ARROW / **Latch Needles**

70% High School Grads in This Mill

Staff Interview

EXCLUSIVE

TO OBTAIN the right kind of employees for a newly opened plant can be difficult, especially when it is located in a town that has several mills already established.

That was the problem which confronted the manager of one branch textile plant which went into business in a small southern city.

When the plant opened, registration for jobs totalled approximately a thousand people in just a short time, largely rejects from other industries or dissatisfied employees of other plants who were "shopping around." Inferior help was certainly not wanted, and robbing other industries of their trained employees was not the way to get along in the new community.

The decision was made, therefore, to build the organization from young, inexperienced people, who could be trained in the proper methods right from the start. This would enable the company to get the class of people it desired, instead of hiring available and experienced but transient help.

Because of certain reputations that had been built up in the past, there was considerable prejudice in some groups against working in a mill. The first task was to "sell" this industry as a desirable place of employment.

Source of Supply. In this community were several accredited high schools, totaling approximately 600 graduates a year, 65% of whom were unable to go on to college. These were the people the manager decided to contact, and they were the type who in that town had rarely been attracted to the textile industry. In this community, however, aside from the textile plants there was little opportunity for graduates who could not go to college, with the result that they frequently drifted to larger cities in search of work.

Selling Students that Mill Is Good Place to Work. The manager visited the schools, talked with the pupils and teachers about the opportunities in his plant, and held mill tours. After a few of the graduates had started work in the mill, others began to see that the opportunities he talked about were there to be had. He tried to get, for the most part, students whose parents had their own businesses in the town or had other ties in the community, such as insurance agents, store managers, farmers, etc. As a result of his continuous efforts, 70% of the employees now in the plant are high school graduates.

But careful screening of applicants, aptitude tests, etc., are just the beginning steps toward having the right kind of employees. Once the applicant is accepted by this company, he is given class work before he goes into the mill. He then goes on a complete tour of the plant, with the manufacturing operation and the use of the firm's products carefully explained. In every way, the management lets the employee know that it is trying to fit him to the proper job, gives him confidence in the mill's interest in him, his welfare, and his future. The employee knows that the job to which he is first assigned needn't be the only one he will ever have. Wherever possible, promotions are made from within the mill.

The management also knows that selling the employee goes beyond the application blank. As the manager explained, "industry must take more time in selling itself to the community, must spend more time in community affairs,

Suggestions for Accident Investigations

An accident is the result of an incorrect or an unsafe work practice or an incorrect or unsafe working condition; or, it might be a combination of both. The person who is to investigate an accident, then, must cultivate an objective, fact-finding mental attitude. He must avoid the common alibis — such as carelessness, improper supervision, low grade help, or lack of training — and look for something more specific. He must look for the unsafe act or the unsafe condition which was involved in that particular accident.

Having determined the unsafe act or unsafe condition, the investigator should then decide which of the two was primary. The basic cause of the accident is the one which if corrected would eliminate the recurrence of this type of accident.

The fixing of responsibility must then be done with great care by the investigator. He must decide whether responsibility is to be assigned to the employee who was most directly concerned with the accident, or his fellow employee, or the company which is represented by supervision and management.

Once the cause is determined and the responsibility placed, the corrective action to be taken is indicated.

Accidents should be investigated for one reason only — to determine the cause, responsibility, and corrective action to prevent recurrence; not to fix blame. Management should adopt this policy and should take steps to see that those investigating accidents are indoctrinated and comply with it.

The foreman or supervisor of the department where the accident occurred is best fitted to make the investigation because of his familiarity with the personnel, processes, and materials involved. Others, however, may be utilized for this purpose — the staff specialist who might also be the safety director, employee groups such as the safety committee, or a group appointed by management.

Forms should be provided to guide the foreman in collecting information so that he will obtain essential data upon which to draw sound conclusions.

The safety director should also make an investigation of the accident to verify the findings of the foreman. This is particularly true when the foreman is inexperienced in making these investigations or when the accident involves two or more departments.

In cases where there are conflicting data, or where it is difficult to fix responsibility and determine corrective action, a so-called hearing is sometimes effective. Representatives of management, the supervisor of the department involved, and the employees concerned attend it.

When a safety committee of employees starts working on an investigation of an accident in their department which involves their fellow operatives, they can produce facts that safety supervisors could have never gotten from others in that department.

From remarks of C. J. Hyslup, safety director, Chatham Manufacturing Co., before the Textile Section, Southern Safety Conference, Atlanta, Ga.

and show how the community depends on the industry."

Continuous Training. Special courses are given for more experienced employees, especially fixers, and review courses are given for supervisors and fixers. The manager not only trains the people in their own jobs, but explains every routine so that they can see their present place in the business, and what their future holds for them. He has found that the people are interested if the management will just give them the time and effort.

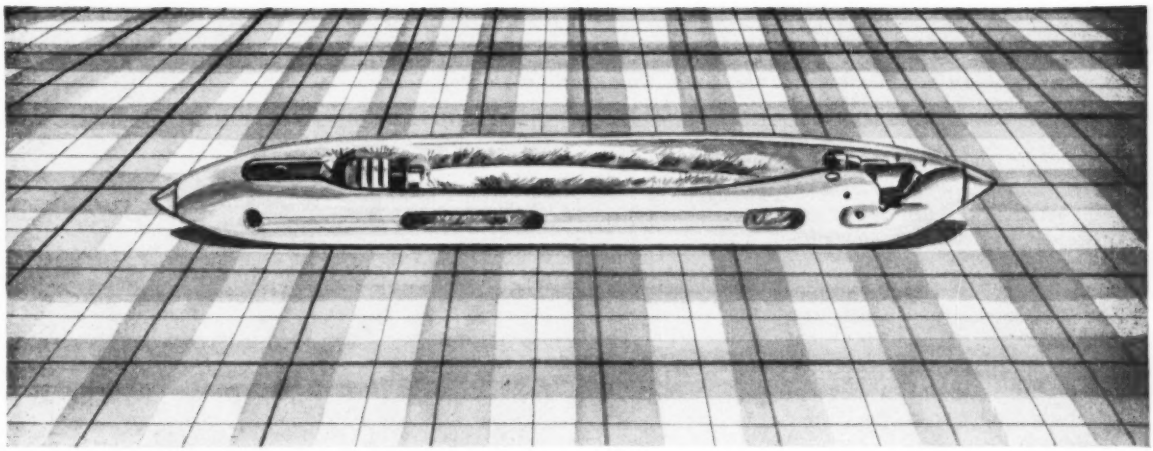
When criticized once for what was considered undue interest in his employees, the manager retorted, "Well, what is more important than our people?" And to emphasize this, during a holiday shut-down period, he took all his supervisors on a tour of the plant, then asked their reactions. After each had made some comment on a technical point or the efficiency of a particular machine, he called attention to the "creepy" feeling of a mill not in operation, and concluded, "a mill closed down is nothing but brick and mortar, cold iron and steel; it is the people who make it a textile plant!"

A prime requirement of the supervisors in this plant is their ability to get along with people, the management feeling that advanced technical ability can be obtained by later training the men in company methods. With 66% of its personnel between the ages of 18 and 25, with no previous working experience and, in the beginning, with little sense of responsibility, proper supervision is essential.

The Pay-Off. This manager believes that his interest in his employees pays off. Through his efforts to put them in the right jobs in the beginning, to give them confidence in their ability, and a knowledge of all operations, they come to realize that in the plant, with diligence, they can be sure of steady progress in their jobs.

His best example of this is the number of young men who have gone off to service and, returning, come back to their jobs in the plant. For these men he has realized the necessity of providing a period of readjustment and of giving them a certain amount of special attention.

To one group of eighteen who had gone off together with their National Guard unit and were given a testimonial dinner on their return, he pointed out the improvements that had been made in the mill during their absence, and explained the company's plans for the future. Most of these boys had been with the company just a short time before they were called. In their period of service they had been many places and had had varied experiences. But all of them returned to the mill, confident that there lay their best opportunities for the future.



Defects: Causes and Remedies

Weaving Filament Synthetics

Part One*

By GEORGE WILLIAMS

EXCLUSIVE

THE WEAVING of fabrics from fine denier, filament yarn brings up a number of problems for overseers and superintendents who have been trained in cotton or woolen mills. Actually, most of the troubles which cause defects in synthetic yarn fabrics are not peculiar to man-made fibers. They are magnifications of similar problems encountered in weaving cotton or wool.

For example, the management in a cotton mill recognizes the importance of keeping yarn clean, but any cotton mill superintendent who emphasized yarn cleanliness to the very minimum required in a synthetics mill would be considered a fanatic.

The quality of the cloth is the real proof of success in synthetics weaving. With this in mind, the information contained in these articles is being grouped under the various types of defects which can down-grade the finished cloth. All of the common causes of defects will be found listed under the various classifications, along with suggested methods for correcting the troubles.

Different mills use different types of looms, let-off and take-up motions, shuttles, and stop motions, but the same principles apply to most types commonly used in weaving filament synthetics.

*This begins a series of articles by a practical mill man. The emphasis is on weaving fine denier, filament yarn. Defects are defined, the causes and remedies given. Subjects to be covered in the series are: broken picks, broken filaments, dirty filling, harness drops, heavy marks, light marks, jerked-in filling, kinky filling, low harness, mis-picks, shiners, shuttle marks, slubby filling, puckery cloth, waviness, broken ends, creases, dirty knots, double ends, floats, loose ends, mis-reeds, oil spots, split ends, stripbacks, temple marks, tight ends, wrong draws, and warp streaks.

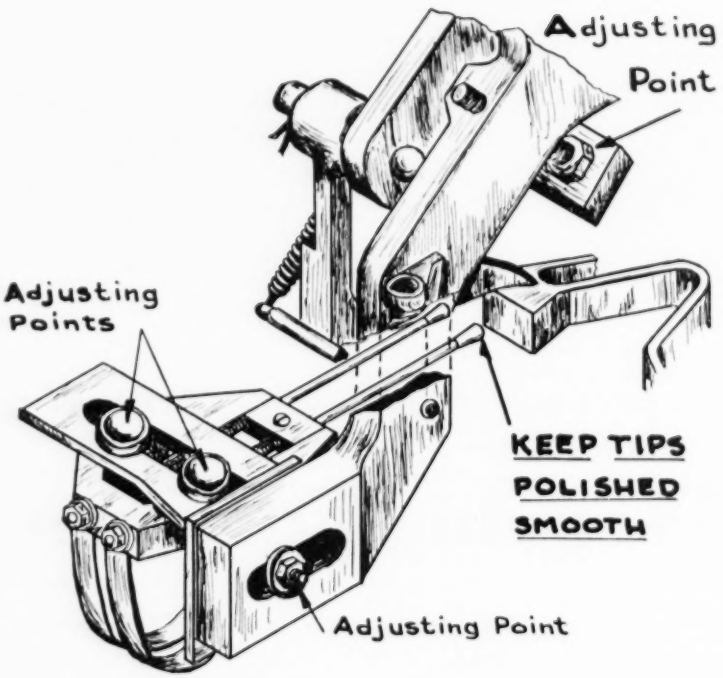
→

Broken Picks. *A filling end breaks or runs out, leaving a distinct break part way across the cloth. Frequently a slug of filling is at the end of the broken yarn.*

1. Filling feelers will damage yarn if they are out of adjustment or if the tips are rough. If the feeler is set either too high or too low, it may miss the shuttle slot, and it can also hit the box front. This will roughen the tip, and it will then cut or bruise the yarn or some of the filaments. If the feeler is set too deep, it will damage the yarn even if the tip is smooth.

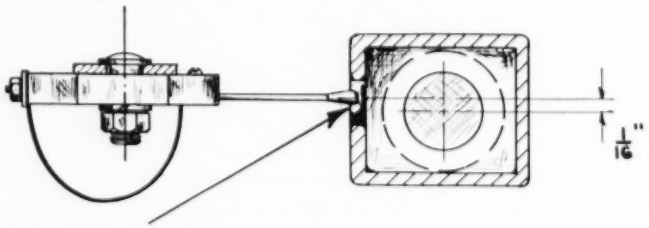
The finer the yarn, the more important it is that feeler adjustment be correct. A light spring should be used on the feeler for light denier yarns, but this is limited by the fact that too light a spring will let the feeler bounce.

Feeler tips should never be polished with emery paper or any other abrasive of this type. Use old leather or chamois for polishing.

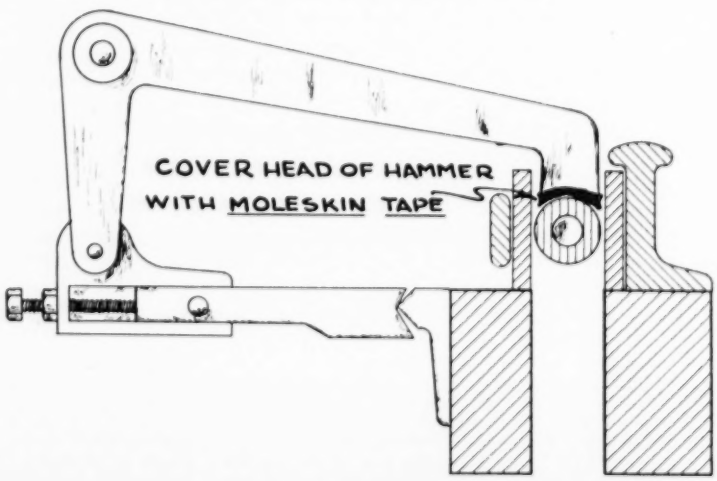


2. Filling transfer motions on automatic looms can cause yarn damage if they are out of adjustment. It is most important that the quill go straight into the shuttle without touching the sides of the shuttle on bobbin change looms. Sometimes it is advisable to wrap the transfer hammer head with moleskin tape so it will not bruise or cut the yarn in transferring a quill. If this hammer drives too deep, the inserted quill will rub against the box plate as the shuttle starts its pick, and this will damage the yarn.

On shuttle change looms, push blocks and drop blocks must be properly adjusted or the shuttle will roll when it is changed. Being turned on its axis, the opening on the top of the shuttle will be toward the giveway, which can strike the bobbin and damage the yarn. Although the loom will stop automatically, the weaver may start it up without inspecting the filling, and damaged or broken yarn or fil-



SET FEELER TIPS SO THEY TOUCH NEITHER TOP NOR BOTTOM OF SHUTTLE SLOT



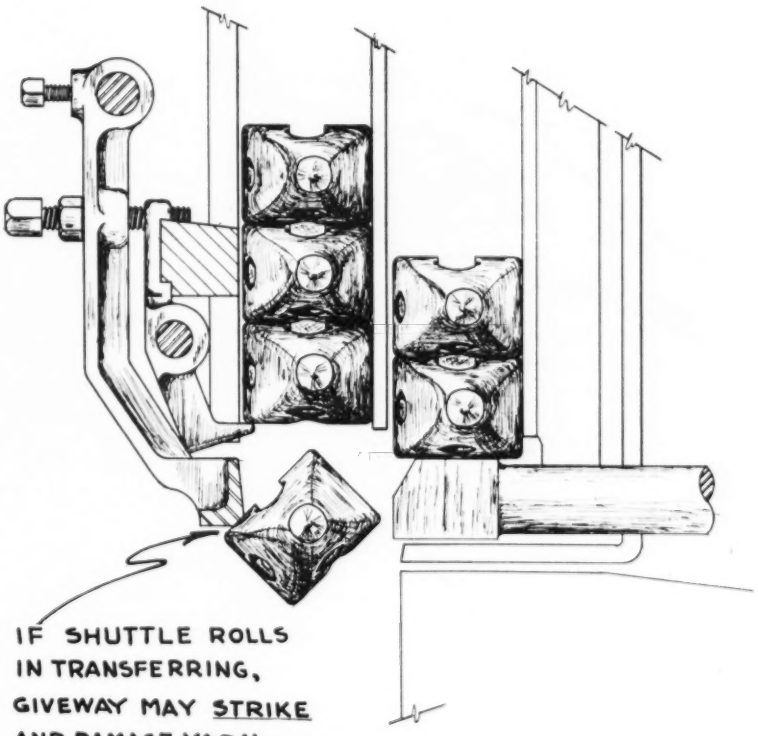
aments will get into the cloth.

If the box top is set too low, the filling will rub against it as the shuttle picks, and if it is too high, the shuttle will go wild and hit the shuttle guard. In either case, yarn on the quill is likely to be damaged.

3. An incorrectly placed bunch or too small a bunch can cause broken picks. Such a bunch will not actuate the feeler or will actuate it too late, and as a result the filling will run out before the full pick is completed, and the finished cloth will show a broken pick. The forming of correct bunches is the responsibility of the quilling department; these employees should be taught to understand the importance of the bunch in weaving quality cloth.

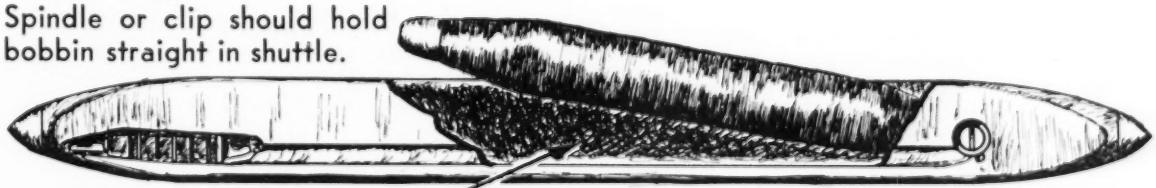
If the loom is not boxing fully, if the quill is not properly placed on the shuttle spindle by the shuttle fillers, or if the filling feeler is bent or not operating, filling can run out in the middle of a pick no matter how good a bunch is built. Check these points before blaming run-out filling on the quillers.

4. If the shuttle spindle or the clips (depending on the type of shuttle used) hold the quill too high or too low or to either side, the yarn will drag in coming off the quill. This is especially true when the yarn is running low. This will break the yarn or some of its filaments; natural twist yarns are very susceptible to this type of damage. On shuttles with split-bolts and springs, a loose spring or worn bolt will let the bobbin move about, and the yarn will be damaged by dragging.



POOR BUNCH

GOOD BUNCH



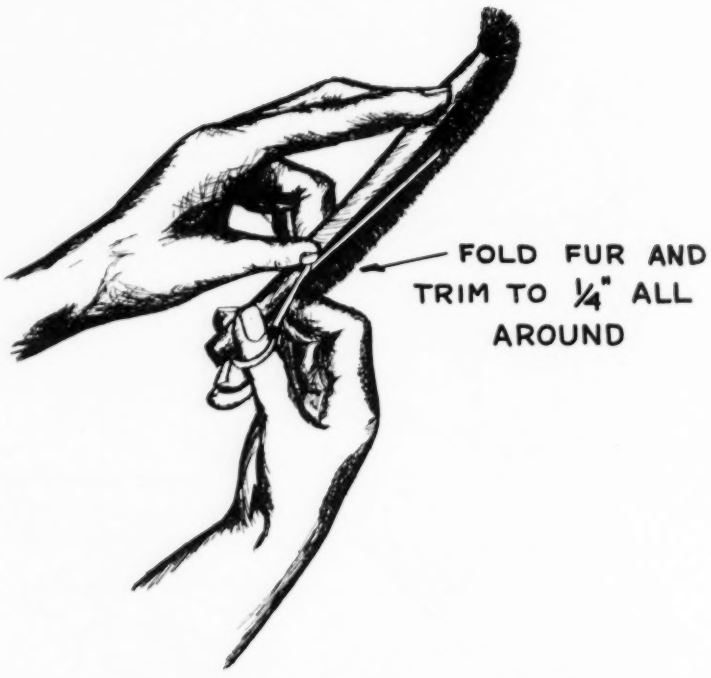
WATCH FOR WORN OR DAMAGED FUR

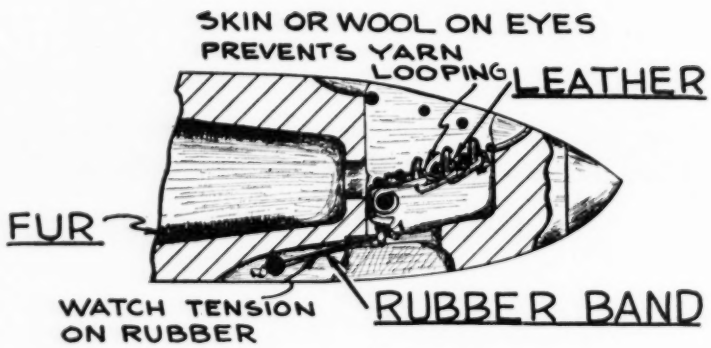
5. Worn or damaged shuttle fur or fur which is improperly trimmed can cause more yarn damage than most weavers realize. If the fur is loose at some point, the yarn can hang and break. If any glue is left exposed during furring, it can damage the yarn.

The amount of fur used is important. A fur that is too heavy will cause too much tension, and the yarn will drag and perhaps break. Too light a fur will permit ballooning, and the yarn will rub against the walls of the shuttle.

The supervisor should experiment with different weights of fur for different types and deniers of yarn. The higher the yarn twist, the heavier the fur should be. This is one of the basic points in weaving quality synthetic fabrics.

Trimming of the fur should be done with care. The best way to trim fur is to fold it down the middle, lengthwise, with the fur side folded in. Trim the fur which extends outward from the edges to about ¼ in. all around. Open the fur and it will be seen that this method leaves uncut the long hairs down the middle, while the length of the hairs decreases to the short ¼ in. length at the edges. This is the ideal shape for shuttle fur.



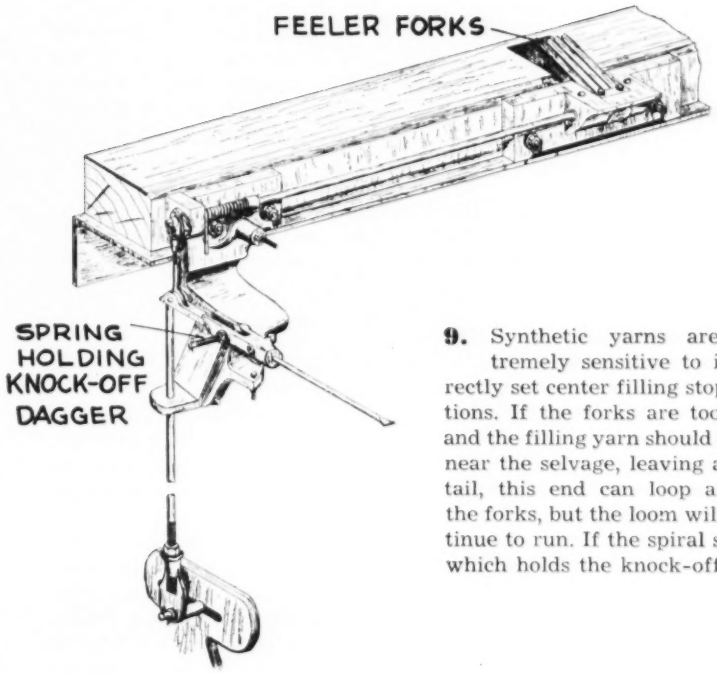


6. The shuttle tension eyes and pins, when sharp and rough, can cut filaments and break yarn. Cracked porcelain eyes can also damage yarn. These parts of shuttles should be inspected at every warp-out and should be examined immediately if a loom starts turning out bad cloth. If rough, the tension eyes should be taken out and polished with very fine abrasive cloth.

On shuttles using Patterson tension eyes, trouble can be caused by having too much tension on the rubber. This will strain the yarn and sometimes break it. Too little tension will permit the yarn to run slack, and the shuttle can run over the yarn and break it. A piece of skin or wool on the eye where it hits the tension pin will keep the yarn from looping around and twisting on the eye. This skin or wool should be replaced as it wears.

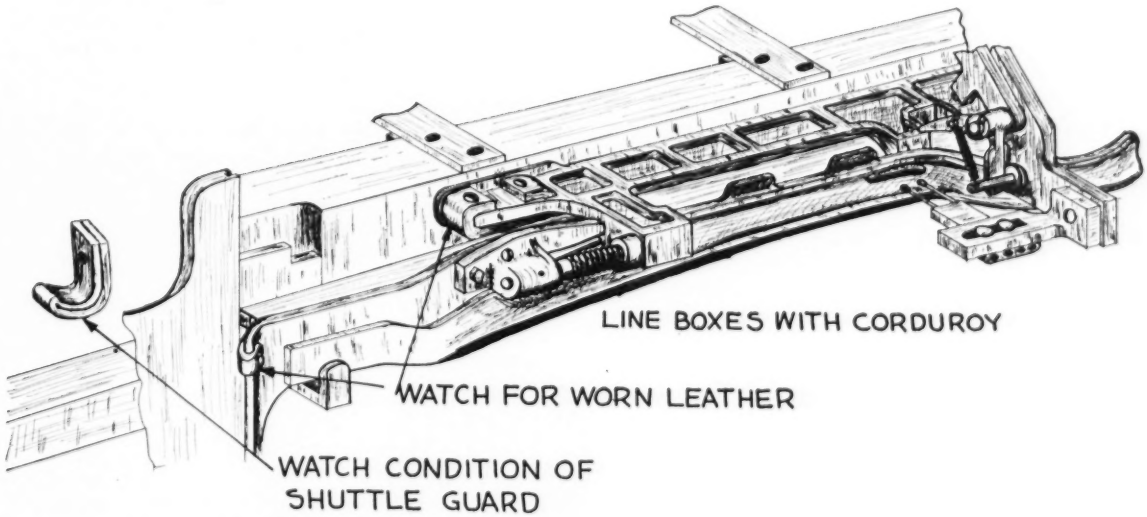
On shuttles using counteracting springs in the eyes to maintain yarn tension, the back tension spring should be weaker than the front. This will let the shuttle thread up easier on transfer. Here, again, too much tension will strain the yarn and too little will let it run so slack the shuttle will run over the yarn in making a pick. A short length of rubber band through the center of the tension springs in these shuttles will help when running high twist yarn, which has a tendency to twist around these springs and snag. The piece of rubber down the center of the springs will hold the yarn free.

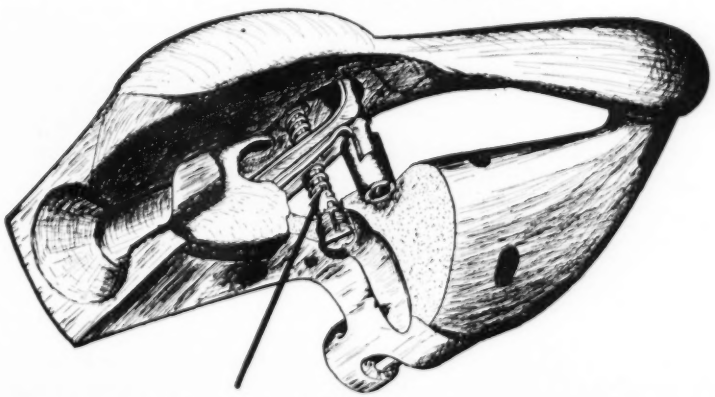
7. Every weaver should realize that any rough places, splinters, or cracks will cause yarn damage. Yarn can be broken or filaments cut by such shuttle defects. Keep all shuttles smooth and polished at all times, but avoid use of waxes or polishes which give the finishing plant troubles.



8. On shuttles equipped with spindles, the employees who fill the shuttles may fail to set the quills down properly over the spindle ears. Such an improperly loaded shuttle will let the quill slide about on its spindle and break the yarn or bruise filaments. Caution shuttle fillers on this point.

9. Synthetic yarns are extremely sensitive to incorrectly set center filling stop motions. If the forks are too long and the filling yarn should break near the selvage, leaving a long tail, this end can loop around the forks, but the loom will continue to run. If the spiral spring which holds the knock-off dagger is too loose or is broken, the stop motion will not function when the filling breaks. Also, a correctly adjusted stop motion can break ends if the undersides of the forks are rough. Usually these forks become rough because they are dipping too deep into the well or are hitting the reed. High twist yarns will abrade these forks and roughen them.





PIECE OF RUBBER BAND THROUGH CENTER OF TENSION SPRINGS KEEPS YARN FROM TWISTING AND BREAKING

10. Yarn can be damaged or broken on worn shuttle guards or by worn felt or leather on box tops, box fronts, or binder blocks. These coverings should be inspected weekly. On box looms, broken picks or damaged yarn can be reduced by lining the boxes with corduroy, which should be replaced when worn.

11. The picker can be the cause of much broken filling. If the loom has too much power on the pick, the acceleration of the shuttle will be so great that it will strain or break the filling. If the picker is not lined up with the shuttle, it will be roughened so that it can grab the yarn when it contacts the eye end of the shuttle. If the picker is to contact the shuttle properly, the shuttle must be boxing correctly. This is a question of binder tension and loom alignment.

12. Broken picks will be frequent if looms are in any way out of line. If the reed or the lay is not in line or if the shed is too high, the shuttle will bounce and strain or break the filling. Follow the loom manufacturer's instruction in lining up looms and use the recommended gauges.

13. Many so-called broken picks are not actually broken but are cut by the temple thread cutter. The temple should be set so that the knife cuts only on transfer. The temple should be set so that it is ⅛ in. from the reed and ⅛ in. above the lay at front center. Sometimes it is necessary to put a piece of leather on the lay to contact the heel of the knife to make sure the knife cuts only on transfer.

14. If the ends of the filling on the bobbins are not securely held by being wrapped around the horn or knob or held by the vacuum cup or end holder, a bobbin can pull the loose yarn partly through the shed on its first pick, making a broken pick in the woven cloth.

15. The covering on the lay, if worn, can cause broken picks and damaged yarn. Lay covers should be changed at every warp-out. A soft felt makes the best cover because it will not harden as quickly as corduroy.

16. Poor yarn conditioning is one of the causes of broken picks. High twist yarn requires more conditioning than natural twist to make it run without kinking. Any kinkiness in the filling is an indication that there may be insufficient conditioning.

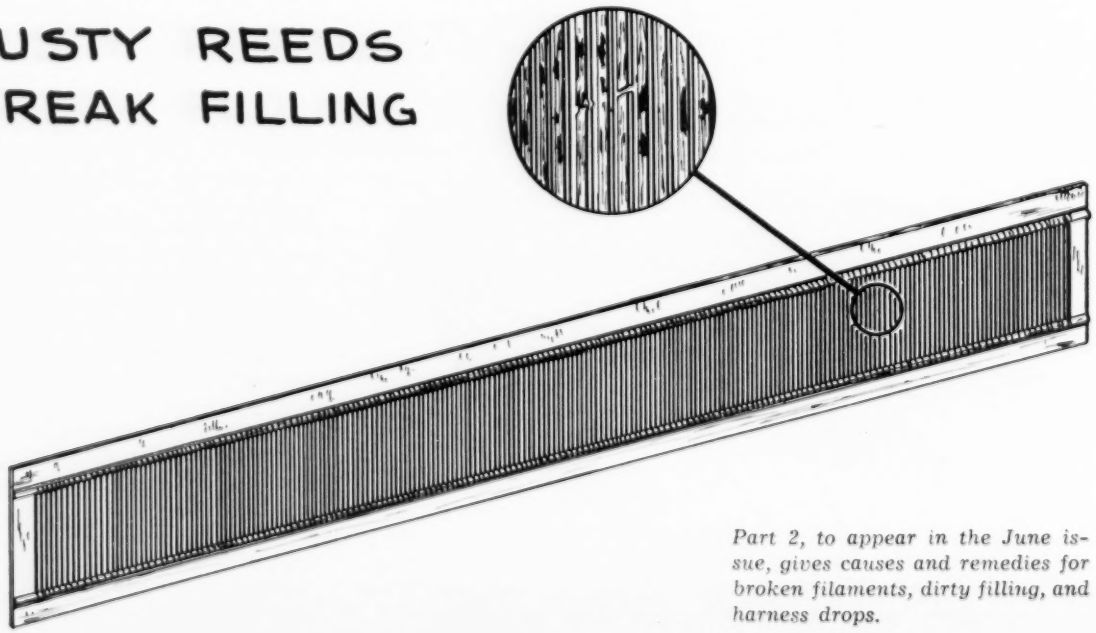
17. Some bruised, damaged, or broken yarn is a direct result of yarn preparation in the quilling department. If there is too little tension put on the filling in winding (quilling) or if the winder is making a short stroke or building too large a package, the yarn can slough-off the quill in weaving. Sloughed-off yarn will not pass through the shuttle eye and will break.

The quills must be in good condition, having no bruises, cracks, or rough ends. Nylon, particularly, will crush quills if the tension is too high in winding, and the yarn will break as it comes off the quill in weaving.

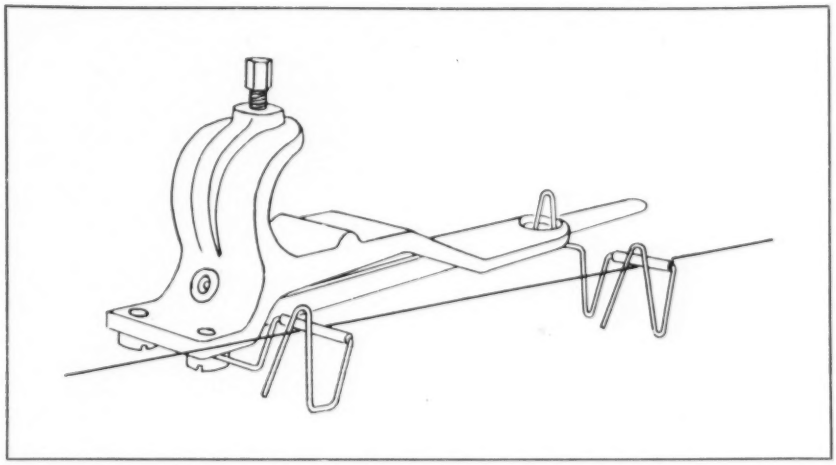
Poor housekeeping in the quilling room can cause trouble. Waste or tails of yarn get onto bobbins in winding and tangle the filling in the shuttle. Winder operators should be cautioned against this, and they should understand the trouble it can cause.

18. While bent, rough, or otherwise damaged reeds are usually associated with warp imperfections, they can also cut filling and cause broken picks. Watch for too many ends per dent toward the selvage. This will also cause broken picks.

RUSTY REEDS BREAK FILLING



Part 2, to appear in the June issue, gives causes and remedies for broken filaments, dirty filling, and harness drops.



Snapper Modification Pays Off

for Pennsylvania full-fashioned hosiery mill

Staff Prepared
EXCLUSIVE

OPERATING difficulties arising from the eyelets of full-fashioned hosiery machine snappers proved to be a source of annoyance to William Bley, executive of Ermine Hosiery Company, South Langhorne, Pa. The abrasive character of nylon yarn grooved the eyelets in relatively short time. When the eyelet grooved, snags and ends down resulted. Frequently, the snapper casting became scored. In addition to stocking damage, replacement costs and down time for snapper repairs had to be accounted for.

Mr. Bley, an inventor in his own right who has been credited with development of the framed heel, proceeded to modify the snapper. His starting point was the original snapper casting. A 12½-in. length of No. 25 SS spring wire and two ⅝-in. lengths of ⅛-in. dia. tubing furnished the rest of the material. The wire is bent into shape and fastened to the rear of the snapper by machine screw and held in position at the front eyelet hole by the original snapper spring, as can be seen in the accompanying scale drawing.

The tubing acts as a roller which rotates freely as the main end or welt yarn slides over it, thereby avoiding friction and wear. Yarn is prevented from sliding off the roller by means of a V notch formed by a bend in the wire. Fixer Herbert Groschopf reports that snapper complaints are a thing of the past and selvage quality has improved.

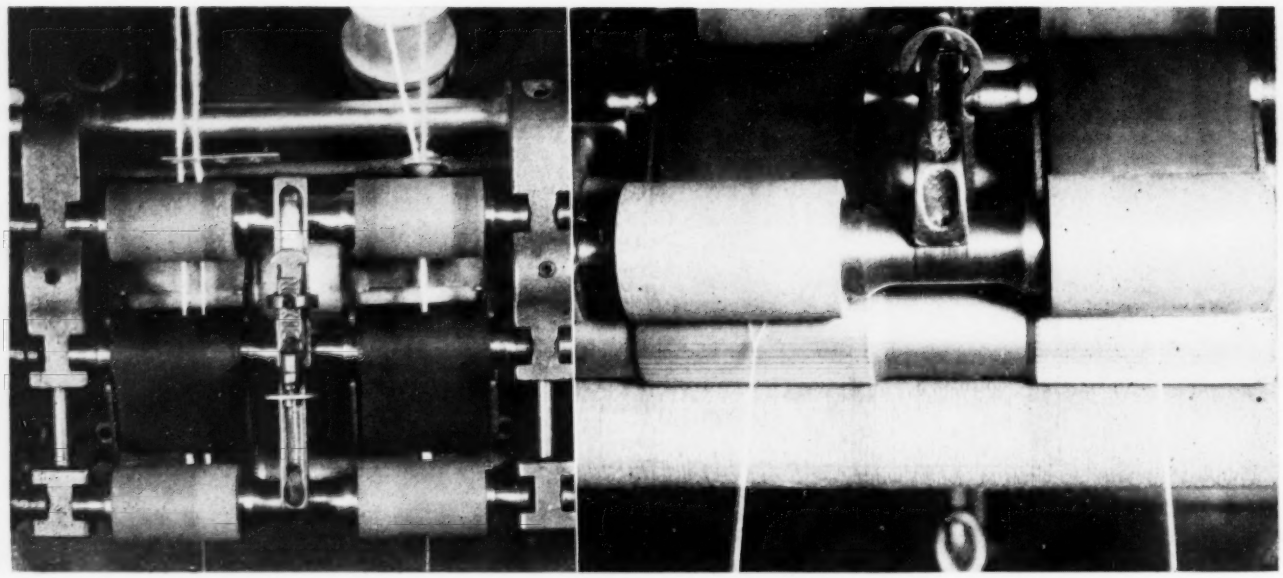
Tolerances Established in Instrumental Evaluation of Cotton

Through interlaboratory testing of samples of nine lots of blended cotton, Subcommittee A-1 of Committee D-13, ASTM has obtained data to indicate deviations in test results in and between laboratories using the Fibrograph, Pressley, and Micronaire instruments.

The precision attained by a group of laboratories maintaining standard atmosphere and making five or more tests per sample is indicated by a standard deviation of 0.012 inch Fibrograph upper - half - mean length and of 0.20 units in Pressley index of strength for individual observations.

Similarly, the precision of mean values for the laboratories meeting the above criteria is indicated by a standard deviation of 0.018 inch Fibrograph upper-half-mean length, 0.20 units Pressley index of strength, and 0.15 units Micronaire fineness.

The between-sample mean values of the standard deviations observed for a single laboratory testing 10 samples of each of the nine check cottons were 0.008, 0.08, and 0.04, respectively.



DOUBLE-TRUMPET arrangement and separated rovings in the drafting zones; on right is conventional trumpet.

TWO TWISTED STRANDS that form the "V" and the final yarn at the front spinning rolls. Yarn at right is spun on conventional arrangement.

Double - Trumpet Spinning

and its effect on yarn strength

By CHARLES B. LANDSTREET and PHILIP R. EWALD*

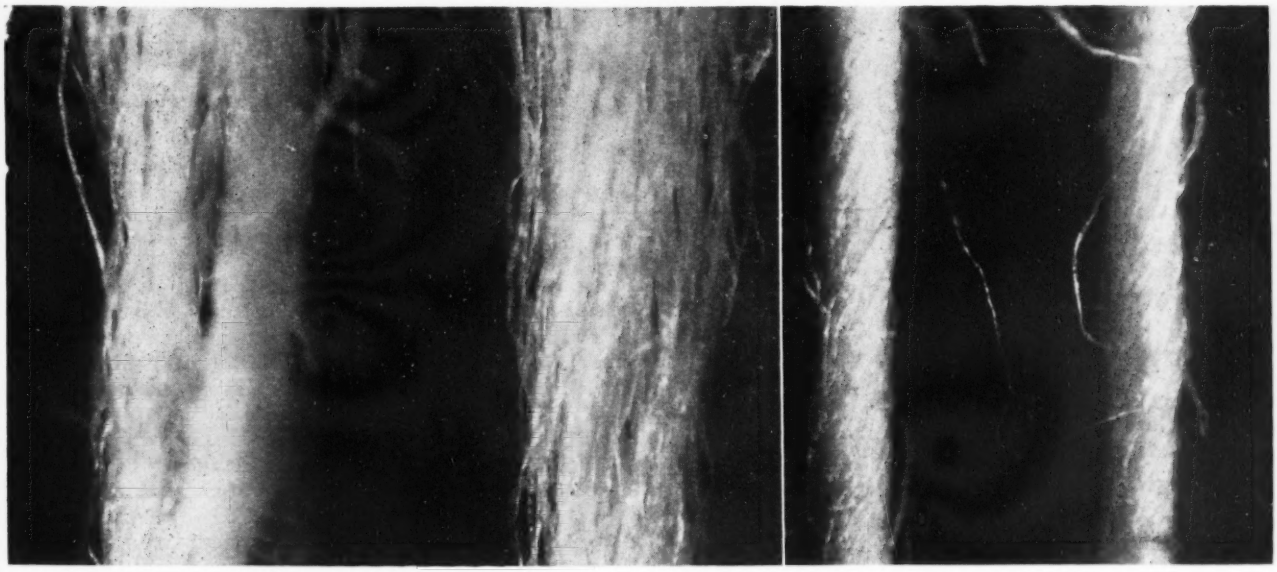
EXCLUSIVE

THE STRENGTH of a fibrous yarn is dependent, among other things, on the position of the fibers in the yarn. For a yarn to have strength, the fibers must be intwined, lying partially on the surface and partially within the yarn. There is probably an ideal way in which the fibers could be arranged in a yarn to give maximum strength for a given set of properties such as fiber strength, length, fineness, crimp, etc. It is not possible on existing spinning equipment to effect this ideal arrangement.

As the fibers leave the front rolls of the spinning frame, they are in the form of a thin, narrow ribbon. When the twist is applied, this ribbon collapses and the pressure generated by the twist causes the fibers to change position or migrate and to assume some unpredictable location in the twisted yarn. Some of the fibers will have most of their length on the surface of the yarn and thus contribute relatively little to yarn strength. Other fibers are under excess tension caused by the twisting of the ribbon and will break before the yarn reaches maximum strength. Also the twist rate will vary along the yarn according to yarn uniformity. These conditions reduce the maximum breaking strength.

If the fibers could be arranged so that each could contribute its full value to yarn strength, and the twist distribution could be improved, the maximum breaking strength could be increased appreciably. It is believed that a better arrangement of the fibers and twist distribution is obtained when yarns are spun by a double trumpet method being studied at this laboratory.

*Cotton technologist and engineer, respectively, in the Division of Cotton and Other Fiber Crops and Diseases, Bureau of Plant Industry, Soils, and Agricultural Engineering, Agricultural Research Administration, U. S. Dept. of Agriculture, and the Tennessee Agricultural Experiment Station, Knoxville, Tennessee cooperating.



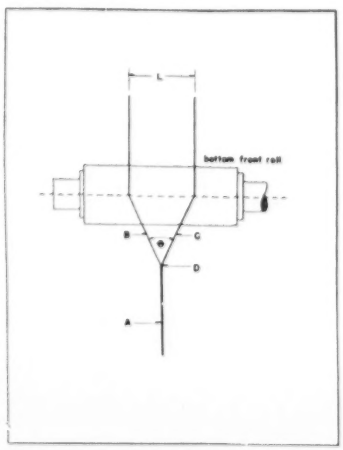
PHOTOMICROGRAPHS OF 22s YARN spun by the double (left specimen in both photos) and single trumpet methods. Compare the untwisted specimens in the left photo and note double grouping of fibers in yarn spun with double trumpet. Twisted yarns in photo at right are for all practical purposes identical in appearance.

DOUBLE TRUMPET spinning is a name given to a particular spinning process in which double creeled roving is supplied to the spinning rolls through separate trumpets. The rovings pass through the drafting zones a predetermined distance apart and come together a short distance in front of the front rolls to form the finished yarn. Essentially, this process appears to be a "plying while spinning" operation whereby a Z-ply on Z-twist yarn is produced. This yarn, however, while externally resembling a single yarn in appearance, has characteristics which resemble neither a ply nor a single yarn.

The Process. In this method of spinning, the roving is double creeled and passes into the bite of the back spinning frame rolls through two separate trumpets set some distance apart. The rovings remain in this separated position all the way through the drafting zones and up to the point of departure from the front rolls. As twist is applied to the yarn, a "V" is formed immediately in front of the front rolls (see Fig. 1). The twist in the body of the yarn (A) causes each of the elements of roving (B) and (C) to become twisted immediately upon leaving the bite of the front rolls.

The elements, which are narrow ribbons, are twisted into small cylindrical yarns which, in turn, are twisted together to form the finished yarn at the vertex (D). If the twist is held constant and the distance (L)—Fig. 1—varied, the vertex (D) will move either closer to or farther away from the front rolls, depending upon the change in (L) in such a manner as to keep the angle θ constant. If (L) is held constant and the twist rate varied, θ will vary, being larger for higher twist rates and smaller for low twist rates. High speed motion pictures have shown that in the cases observed the twist rate in the body of the yarn (A) is in the order of twice that in the elements (B) and (C).

FIG. 1. Schematic diagram showing the bottom front spinning roll, the separated roving strands, and the "V" which is formed during the spinning process.



Further analysis of the process, which is beyond the scope of this paper, is now under way.

Tests. To show the characteristics of yarns spun by this method, a series of twist multipliers was selected and a number of yarns was spun using different roving spacings with each twist multiplier. Four cottons were used which ranged from 13/16 to 1½ inches in staple length. Spinning was done on a standard Whitin Long Draft** spinning frame on which the special double trumpet

**The mention of trade products does not imply their endorsement by the Department of Agriculture or the University of Tennessee over similar products not mentioned.

was substituted for the conventional roving trumpet.

The cottons with data on staple length and other fiber properties are shown in Table 1. Card speeds and settings for each cotton were based on the manufacturer's guide[1]. The 55-grain card sliver was passed through two stages of drawing and made into 2.75-hank roving, except for Pima 32, which was made into 6.00-hank roving.

The draft distribution for the Whitin Super Draft roving frame for the Mebane cotton was based on the draft guide developed by J. R. Corley and J. Simpson[2]. The draft distributions for the Delfos, Stoneville, and Pima cottons were based on the draft guide developed for long, fine cottons by J. R. Corley[3]. In the spinning process, five twist multipliers ranging from 3.0 to 5.0 in increments of 0.5 were used for Delfos and Stoneville. For Pima, the range was from 2.5 to 4.5 in 50s yarn and 3.0 to 5.0 in 34s yarn. The range for Mebane was 3.5 to 6.0.

TABLE 1. FIBER PROPERTIES OF THE FOUR COTTONS USED IN THE DOUBLE TRUMPET SPINNING STUDY

Variety	U.H.M.	M.	Fineness mm^2/mm^3	Pressley Index	Classer's Length
Mebane	0.77	0.60	472	7.04	13/16"
Delfos 9169	1.20	0.95	510	6.96	1-1/32"
Stoneville 2B	1.13	0.90	506	7.14	1-1/16"
Pima 32	1.38	1.11	540	8.84	1-1/2"

The roving spacings used are shown on the accompanying graphs. All controls (0 spacing) were spun using conventional spinning frame trumpets. For this study the special trumpet was made from a sheet of aluminum with holes drilled and flared for each of the selected spacings. Ten spindles were used with all runs made on the same spindles. After being spun, the yarn was reeled into 120-yard skeins on a 1½-yard skein winder. The skeins were stored for 24 hours in standard atmospheric conditions before testing. The yarn strength was measured on a pendulum-type tester of 300 pounds capacity.

Results. The control and experimental twist-strength curves for Delfos 9169, 22s yarn as plotted from the observed data, is shown in Fig. 2. The maximum strength for the control occurred when a twist multiplier of 3.5 was used. The plateau of this curve is limited and the strength falls off rapidly on either side of the maximum point. While the experimental (double trumpet) curves are similar to each other, there is a striking difference between them and the control curve. Three features are outstanding: first, the yarn strength is greater for each of the experimental curves; second, the plateau is elongated; and third, the twist multiplier for maximum strength has shifted.

The greatest strength obtained from Delfos using the conventional trumpet was 129 pounds and occurred at a twist multiplier of 3.5. The greatest strength obtained in the double trumpet runs was 136 pounds at a twist multiplier of 3.9 This is an increase of 7 pounds or 5.4% over the control. At a twist multiplier of 3.5, the experimental yarn strength dropped 1.1%. In the control, a similar shift of twist multipliers resulted in a decrease in strength of 4.7%. At similar points on the high side of the twist multiplier which gave maximum strength, the decreases were 0.4% for the experimental yarn and 1.6% for the control.

Fig. 3 is a graph of the twist-strength curves for 22s yarn made from Stoneville 2B cotton. In the control run, the strength dropped

FIG. 2. Twist-strength curves for roving spacings of 0, 6, 9, and 12 millimeters. Delfos 9169, 22s yarn.

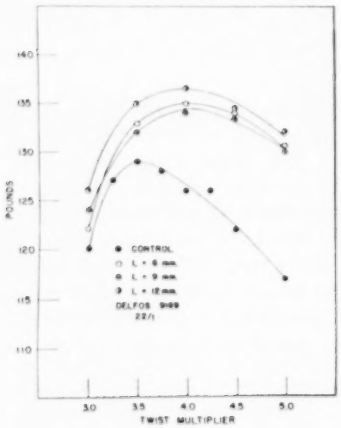


FIG. 3. Twist-strength curves for roving spacings of 0, 6, and 12 millimeters. Stoneville 2B, 22s yarn.

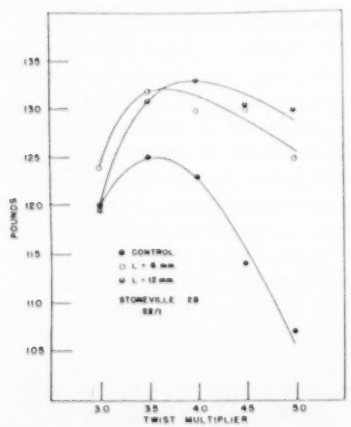


FIG. 4. Twist-strength curves for roving spacings of 0 and 6 millimeters. Mebane, 22s yarn.

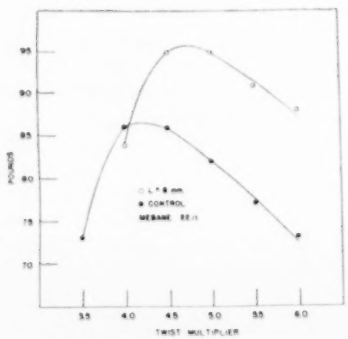
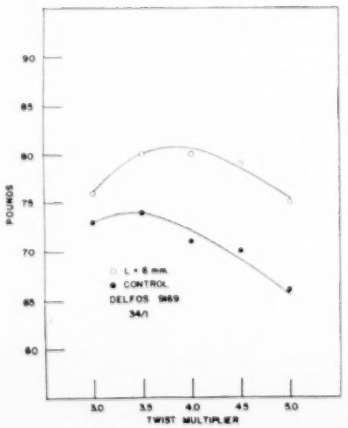


FIG. 5. Twist-strength curves for roving spacings of 0 and 6 millimeters. Delfos 9169, 34s yarn.



off rapidly on both sides of the maximum point. The experimental curves do not show this tendency at the higher twist multipliers. Again, as in Fig. 2, the experimental yarn broke higher at all twist multipliers than did the control yarns.

The twist-strength curve for 22s made from Mebane is shown in Fig. 4. In this instance, the control and experimental curves are similar in shape, but the experimental curve is higher than the control. The failure of this cotton to show a flat top curve for the experimental yarn might be expected since short, coarse cottons react more readily to twist than the longer and finer types. Mebane would not spin at a roving spacing of 6 millimeters when the twist multiplier was less than 4.0.

The twist-strength curves for the 34s yarn made from Delfos and Stoneville are shown in Figs. 5 and 6, respectively. In each instance, the experimental yarns had higher breaking strengths than the controls, and the experimental curves showed the characteristic flat top.

Figs. 7 and 8 show, respectively, the twist-strength curves for 34s and 50s made from Pima Cottons of this length and fineness are not normally spun into such coarse counts, but are shown here for comparison purposes. Using a roving spacing of 6 millimeters, the 50s would not spin with twist multipliers lower than 3.0. Again, the experimental curve is very flat, and the yarns are higher in strength than the controls.

Conclusions. The data presented show that the maximum yarn strength obtainable by conventional spinning can be increased by using the double trumpet method. With a twist multiplier of 3.0 and up in medium length cottons and a roving spacing of 6 millimeters, no difficulty was experienced in the spinning process, including piecing up ends with the frame running. In the finer counts of yarn made from either medium or long cotton, better results could possibly be obtained by using slower spindle speeds, lighter travelers, and a roving spacing of about 3 millimeters.

The major usefulness of the process in industry seems to be in the spinning of yarns near the high side of the twist multiplier range. It is here that yarn strength is greatly increased over yarns spun by conventional methods. In evaluating new varieties of cotton for spinning qualities at this laboratory, the flatness of the twist-strength curves produced by the double trumpet method of spinning is important.

When yarns are spun for maximum strength in the routine testing program, only one twist multiplier is used. At the present, this twist multiplier is based on fiber length alone. Since it has been shown recently[4] that fineness plays an important part in determining the twist multiplier for maximum strength, it is evident that errors occur when selections are made on fiber length only, or if fiber length has not been accurately determined. The flatness of the twist-strength curves of yarns spun by the double trumpet method indicates that the new method will reduce the magnitude of these errors.

Eleven Checks Total $1,463,371,812

The checkbook approach was recently used to impress upon Westinghouse employees that the problem of spending less than is taken in is not only the individual's problem—it plagues corporations too.

The story shows how quickly $1,463,371,812 disappears; eleven checks written, and after that — "I've got plenty of nothin'."

ACKNOWLEDGMENTS

The authors wish to acknowledge the helpful comments of **D. M. Simpson, Dr. K. L. Hertel,** and **Dr. C. J. Craven,** and to express their appreciation to the personnel of the **Fiber Laboratory,** U. S. Cotton Field Station, Knoxville, Tennessee, for all fiber analyses, and to **Herbert Hutchens** of this laboratory for his work in the processing and testing of yarns used in this study.

REFERENCES

(1) Saco-Lowell Hand Book, Vol. 2, Carding.

(2) Corley, James R. and Simpson, Jack. "Textile Industries," Dec., 1952, Vol. 116, No. 12, p. 125.

(3) Corley, James R. "Textile Industries," March, 1949.

(4) Fiori, Louis A. and Brown, John J. "Textile Research Journal," Vol. XXI, No. 10, Oct., 1951, p. 750.

FIG. 6. Twist-strength curves for roving spacings of 0 and 6 millimeters. Stoneville 2B, 34s yarn.

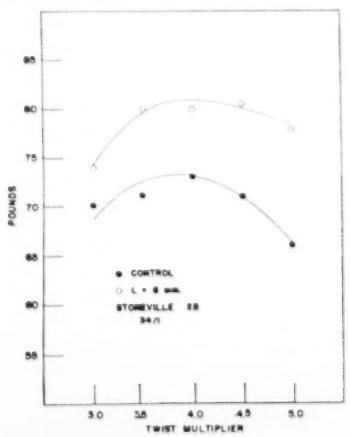


FIG. 7. Twist-strength curves for roving spacings of 0 and 6 millimeters. Pima 32, 34s yarn.

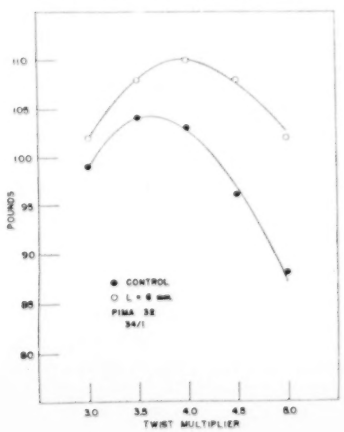
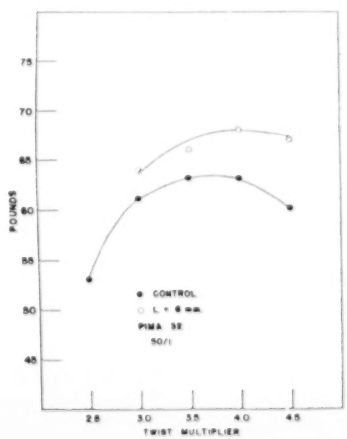
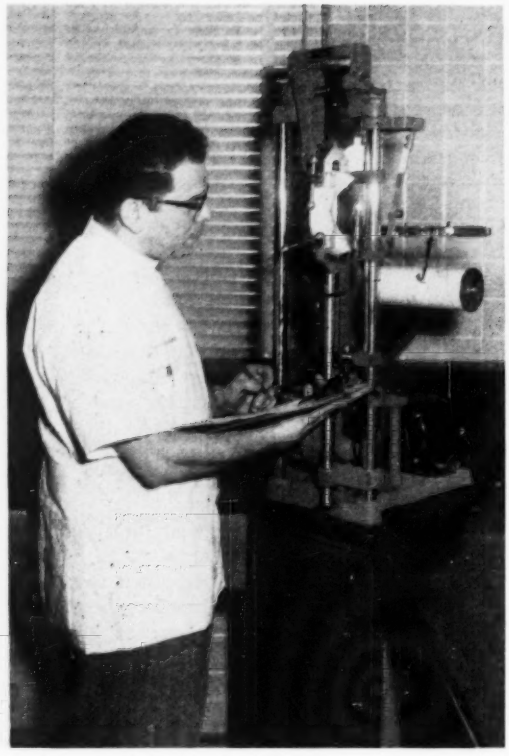
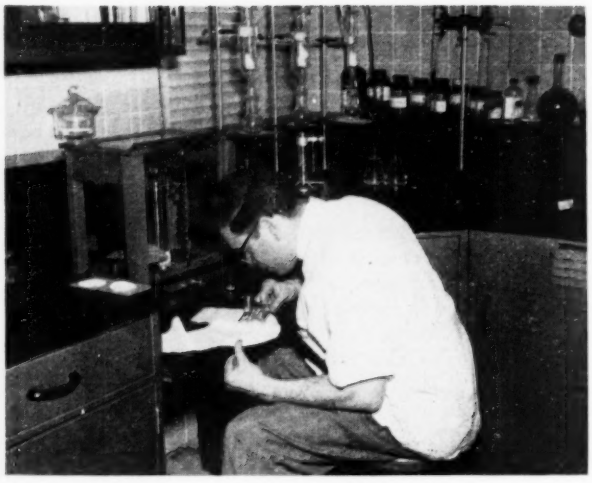


FIG. 8. Twist-strength curves for roving spacings of 0 and 6 millimeters. Pima 32, 50s yarn.







They Are

Needle trades need good material to satisfy their customers. The business is yours if you can carry the ball—remember, progressive apparel manufacturers are watching you, the supplier.

EXCLUSIVE

THE LADY WITH THE PURSE has become a quality conscious, highly discriminating shopper. Style and color influence her choice, but price and practicality are the final persuaders. Does the garment shrink? How long does it wear? Will colors fade or bleed? Is the fabric washable?

These are the kinds of questions that customers are bombarding sales people with nowadays. Smart retailers are passing the word down the line. The smart apparel manufacturer is asking the same questions of his textile suppliers.

Quality Consciousness. The trend toward quality consciousness is reflected by a growing concern among manufacturers over the quality of raw materials going into their products. The need for scientific quality control has been forced upon the needle trade industries. As a result, users of your fabrics are WATCHING YOU, the basic textile supplier, with a very critical eye. If you want their business, it might be a good idea to see exactly what is going on in the needle trades about quality control.

One case in point is the Peter Pan Manufacturing Corp., manufacturers of high quality women's foundation garments, with modern sewing plants throughout the United States, Puerto Rico, Canada, and ten foreign countries. Millions of yards of cotton broadcloth, nylon taffeta, rayon satins, woolen felts, netting, laces, and jersey tricots go into this company's products.

From the president, Henry M. Plehn, down to the last floor sweeper, it is appreciated that rigid control and standardization of incoming raw materials are essential to the prosperity of the company. It is on the slogan QUALITY FIRST that Peter Pan owes its rapid and amazing growth from a virtual unknown to one of the largest factors in the trade in just a few short years. High quality merchandise being shipped out of this company's numerous plants is attracting more and more retailers and satisfied customers. In order to preserve such hard won gains, raw material quality control has become a major function of top management at Peter Pan.

Quality Control Program. Peter Pan's quality control system affects almost every department of the company. The purchase and use of the right material is assured by means of a seven-point program.

(1) Product development.
(2) Raw material analysis.

PHOTOS: Left to right, laboratory technician, Irving Isaacson, tests fabric strength; fabric construction is carefully examined to determine compliance with specifications; Harry Heiman (standing), Peter Pan purchasing agent, requires suppliers to toe the line on specifications for every item of purchase. Textiles are tested as received in the warehouse. Lots falling below Peter Pan's standards are rejected, and so might be the supplier.

Watching You!

By ROBERT A. POSEY*

(3) Purchase by specification.
(4) Receiving inspection and testing.
(5) Supplier rating.
(6) Plant screening and final inspection of garments.
(7) Consumer reaction.

First step in this elaborate control set-up calls for thorough product development. All materials used in Peter Pan merchandise are exhaustively tested in field and laboratory. Those data are compared with past performance as well as competitive merchandise. A product engineering committee consisting of ranking members of the designing, engineering, production, sales, purchasing, and quality control staffs must approve the raw material before any further step is sanctioned.

Specifications. Upon such approbation, a raw material specification which contains many exacting requirements for the purchasing department is drawn up. Included in the "spec" is every quality control characteristic which might conceivably affect the end use and serviceability of the finished garment. When the specification has been completed it is formally reviewed by management. From that point on, no raw material purchase is made without a "spec" on it.

Prospective Peter Pan suppliers are invited in for conference in order to familiarize them with the specifications. Next, production samples are submitted by the suppliers and checked in the laboratory and field. Finally, the best rated suppliers are selected and copies of specifications and purchase orders are sent to them together with approved standard samples.

Testing. A key point in the Peter Pan system is the testing of incoming raw materials to determine whether or not they adhere to standard. For example, here is how cotton broadcloth is inspected upon arrival at Peter Pan's warehouse.

(1) The goods are perched by trained examiners who record weaving defects, width, length of roll, identification, and packaging.
(2) Swatches are cut from each roll and put through shade matching inspection. A room has been constructed especially for this operation. Illumination engineers installed lights which enable the detection of minute differences in shade.
(3) Additional swatches are statistically sampled from each lot and laboratory tested for:
    a. Construction.
    b. Tensile strength.
    c. Shrinkage.
    d. Washability.
    e. Permanence of finish.
(4) All inspection data are reviewed and compared with the "spec" on these goods by a quality control technician. An acceptance or rejection slip is forwarded to the receiving, purchasing, and production departments.

The quality control procedures already mentioned are normally

*Robert A. Posey is an industrial engineer with extensive experience in textile manufacturing, government procurement, and apparels. Mr. Posey is in charge of quality control at Peter Pan Manufacturing Corp.

Directory of Safety Posters for 1953

Funny scenes and comic mice, or serious thoughts and sound advice — you can take your choice from the National Safety Council's new 1953 Directory of Occupational Safety Posters containing 756 miniature illustrations of colorful visual salesmen of safety.

Both the serious and humorous approaches are used to provide change of pace and to enable the industrial safety director to select the soundest psychological approach to his problems.

In selecting poster subjects, the Council consults the latest occupational accident statistics so that proper emphasis can be placed on the weakest spots.

For a copy of the directory, write the Council, 425 N. Michigan Ave., Chicago 11, Ill.

sufficient to stop the possibility of second class goods getting into the hands of Peter Pan's customers. However, additional safeguards have been developed as a further guaranty.

Suppliers Rated. All Peter Pan's suppliers are rated. The relative performance of each supplier is ascertained from a review of a master book of test data. As soon as a supplier indicates a laxity, ie: shipping goods inferior to that of his competitors or under the accepted standard, a top management meeting is called to review the record. Here, the axe may fall. In some cases where warranted, the business is shifted to a better supplier.

That isn't the end of raw material control. Material is continually screened during manufacturing operations. In various sewing and assembling processes from start to finish of the garment, inspectors are constantly on the look-out for defective materials or ways in which the material may be improved from the viewpoint of a sewing machine operator. Imperfect goods are taken out of the production line. Garments are analyzed and a weekly imperfect product report is issued to management so that special remedies may be devised.

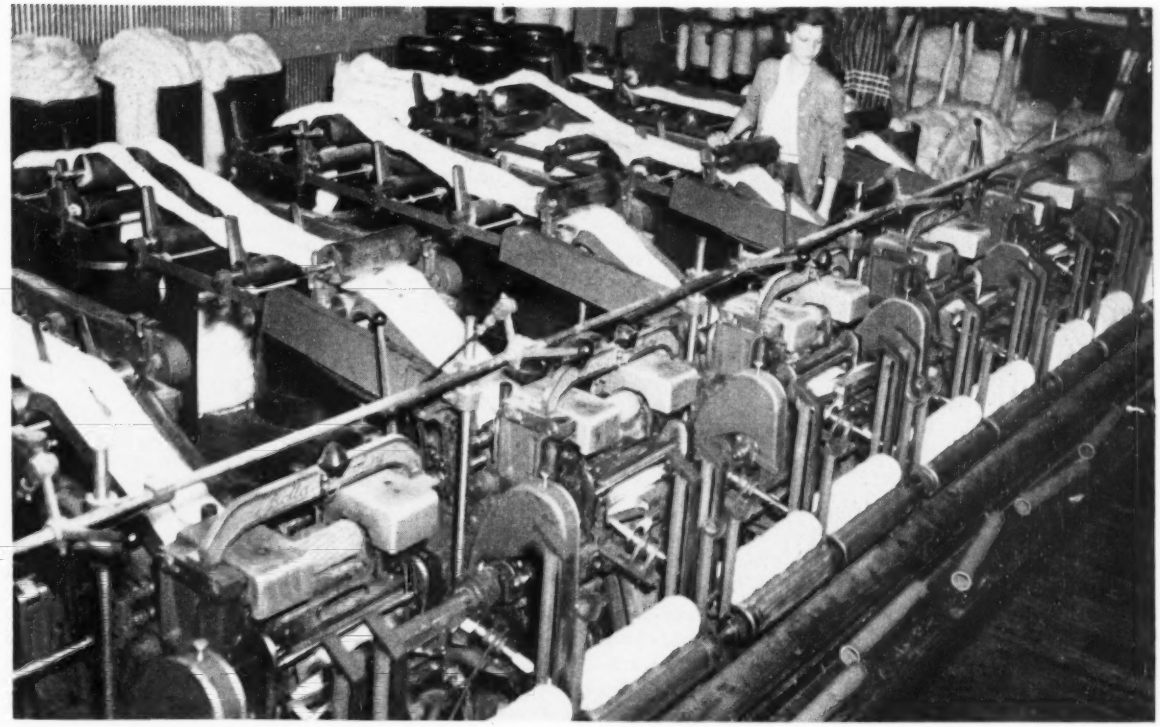
The development of sensitive mechanisms for determining customer reaction to the finished product was one of Peter Pan's most vital quality control steps. For detecting the ground swell of customer opinion at "grass roots" level, stylists periodically visit stores in all parts of the country where merchandise is checked and hundreds of customers are interviewed each day.

Customer Report. A detailed report on customer reaction, including complaints as well as favorable testimonial, is dispatched to the quality control department. Another counter check is the customer's returns report which contains valuable clues that would lead to product improvement. Garments returned for poor workmanship or serviceability reasons are carefully inspected. Results of the examination are forwarded to management, and suitable action is taken to eliminate any assignable causes of complaint.

What are the benefits of this involved and obviously expensive quality control program? First, the customer is assured only the highest quality product. Second, manufacturing operations are more efficient due to the standardization of finish and construction of materials. Recuts, damages, and seconds are reduced to a minimum. Finally, the supplier of dependable quality textiles can expect a steady flow of business. By spending money to take the "unknown" out of Peter Pan's dictionary, the company has actually made money.

What does this mean to the textile industry? The needle trades need good material to satisfy their customers. The business is yours if you can carry the ball, but remember—Peter Pan and similarly progressive apparel manufacturers are watching you, the supplier.

KEY POINT IN QUALITY CONTROL SYSTEM at Peter Pan is the testing of incoming raw materials to determine whether or not they adhere to standard. Results of tests are recorded on forms shown in foreground here. Specifications and standards may be seen in background.



FIVE-HEAD INTERSECTING GILL (Isotta Fraschini) used for pre-combing operation at High Rock Mills. Many-sectioned gill is operated by one attendant.

Main cog in High Rock's spinning system——

French Worsted Combs

Staff Prepared

AMERICAN MILLS have been in the forefront of a world-wide surge of interest in French type worsted combs. In less than ten years such equipment has secured and captured an impressive segment of the yarn market. One principle reason for this phenomenon is that spinners are prone to venture into any new system favoring low cost and high quality production, and French combs lend themselves well to abbreviated spinning systems.

EXCLUSIVE

HIGH ROCK MILLS, Inc., of Philmont, N. Y., is one of the many mills in this country that has oriented its spinning department around the French comb. Though there are as many variations in lay-out of machinery as there are mills owning combs, factors which promulgate French combing are common for all mills.

High Rock, as well as numerous counterparts scattered North and South, embarked on modified worsted spinning when it became evident after World War II that weak markets would cause serious incursions on those mills unable to flex production to changing situations. The French comb, in combination with cotton, modified American, Continental, French, and other spinning systems, yields a new peak of versatility.

Within a wide latitude, installations featuring a combing operation can handle many combinations of staples, deniers, and fibers. And this can be done with relatively low machine investment

due to a reduction of the number of steps in processing common to abbreviated spinning. Floor space and labor requirements are also less than for conventional spinning systems.

High Rock's specialty is on wool and cotton blends for cotton spinning systems. Wool staple in these blends varies from 2 to 7 inches; cotton stock averages around 1 9/32". Conventional systems would find it difficult, if not impossible, to cope with this array of staple. However, French combs coupled with improved drafting assemblies peculiar to the modified spinning systems allow positive fiber control for a good range of staple, yielding uniform yarns possessing highly prized worsted characteristics.

How important this is from mill viewpoint can be judged from these considerations:

(1) Only 25 per cent of American wool requirements can be met by domestic sources.

(2) Synthetic fibers are abundant and increasing in supply.

(3) Wool prices have been erratic, subject to speculation, and sensitive to foreign pressures.

(4) Market for light weight suitings using synthetic staples is advancing.

(5) Supply of long staple wool is not as firm as that of short staple wool. This condition has prompted top makers to turn from 2½" to 3" staple as a minimum for combing to 1" to 1½" staple.

(6) Machinery is continually being evolved which offers versatility, and these machines are readily available.

(7) General obsolescence of much worsted equipment makes the current period ideal for replacing with new machinery geared to new fibers.

Such are the factors that have ordained a 25 per cent increase in the number of rectilinear combs installed in the United States since the year 1943 (Bureau of Census, "Facts for Wool Manufacturers").

This growth in French combs has been at the expense of Noble combs. Short wools and long staple fibers of all varieties, including bulky fibers and low tensile strength synthetics, run through the French rectilinear comb with 50 per cent less noilage than Noble combing. Nep counts on fine pinned French combs are approximately 40 per cent less.

Modern French combs now coming into the picture are highly superior to their predecessors. Their production is said to be 60 per cent higher. Superior engineering of the comb frames has resulted in fast operation without vibration. The fine machining present in this new equipment permits more accurate settings, and proper setting is paramount for short staples, for eliminating neps, and for cutting out dandruff. A well-condensed regular web attributed to improved swords and a firm sliver obtained from adjustable false twist devices are additional features of late model combs. All these facets of combing raise the quality of yarn and lower spinning and burling costs. One operator can handle at least eight combs without any difficulty.

Specializing in short top prepared for cotton spinning systems, High Rock has installed a number of pieces of equipment that complement the flexible nature of the French comb:

(1) Two-cylinder 60" metallic cards (Proctor and Schwartz).
(2) Seven-head intersecting gill, can creel, can delivery (Isotta Fraschini).
(3) Five-head intersecting gill, can creel, ball delivery (Isotta Fraschini).
(4) 13" and 19" French intersecting combs, ball creel, can delivery (Isotta Fraschini and Societe Alsacienne).
(5) Five-head intersecting gill, can creel, can delivery (Isotta Fraschini).
(6) Dual-head Pin Drafter, can creel, can delivery (Warner & Swasey).
(7) Dual-head Pin Drafter, can creel, can delivery, (Warner & Swasey).
(8) Quad-head Pin Drafter, can creel, can delivery (Warner & Swasey).
(9) SF-4 long draft slubber (Saco-Lowell).
(10) Long draft apron ring spinner (Isotta Fraschini and Saco-Lowell).

The many variations of this system incorporating the French comb as practiced by other mills can present a confusing picture. To mention several: porcupine drawing frames or gill flyers may be encountered in place of long draft slubbers; three operations of gilling without a subsequent pin drafting; three operations of pin drafting without any gilling; open gilling after pin drafting; and others. A comparison of these coexistent layouts is next to impossible. In practice, each mill molds the layout around the desired yarn specification.

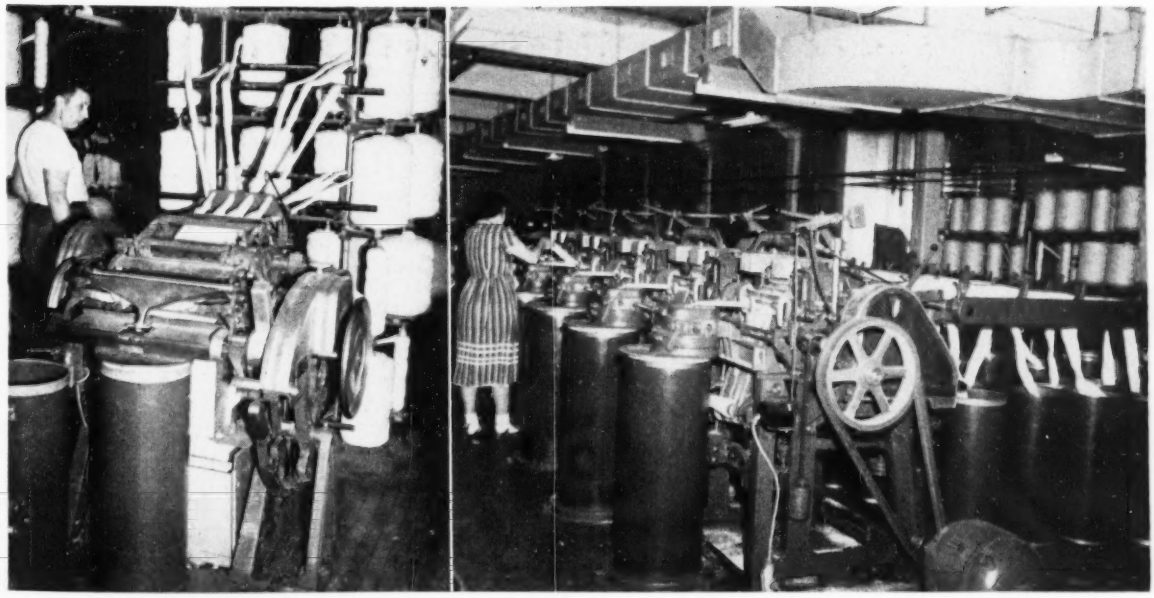
Joe Crowley, High Rock's general manager, has planned his installation for a good average range of staple lengths but particularly for short fibers. Mr. Crowley, brought to the mill by Phil Braunsfel several years ago, has pioneered in this field.

Highlights of the High Rock Operation

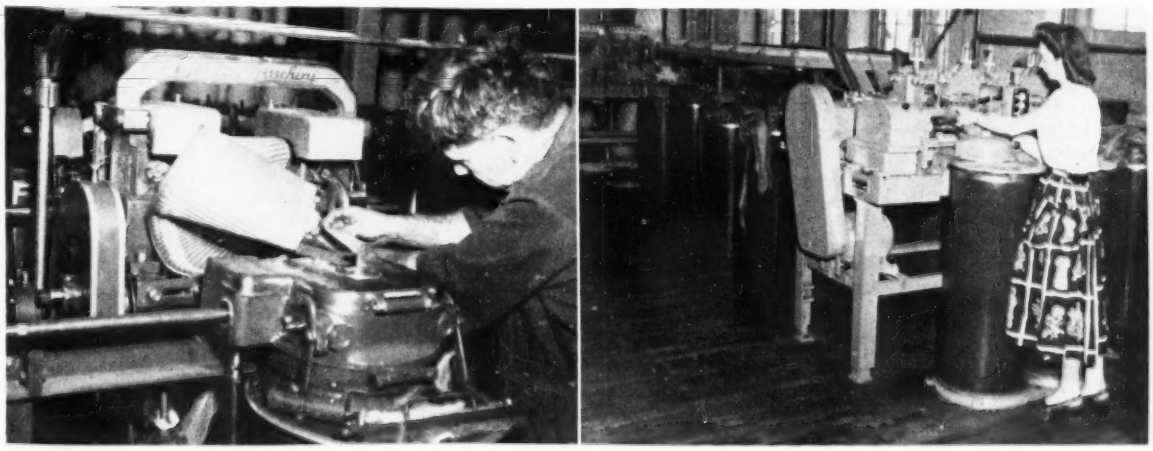
Carding. Four cards feed sliver by pulley conveyor into one large coiler can. In the can, fiber is kept clean and free from disarrangement. Cans simplify creeling at the first intersecting gill operation, whereas balls are considered unwieldy and subject to damage.

The preferred method of carding is to leave the majority of neps for extraction at the combs. A Morrel burr remover, located before the breaker, assists in cutting down the number of burrs in order to facilitate further processing. Card clothing receives unrelenting attention—points must be sharp.

Pre-Comb Gilling. The carded sliver goes through two successive gilling operations, the first being a five-head intersecting gill with can delivery, and the second a seven-head intersecting gill with ball delivery. One operator is stationed at each machine. By combining so many deliveries into one machine a real labor saving has



COMBS (left) are key machines in High Rock's spinning system. A five-head, can delivery, intersecting gill (right) follows combing. Note air conditioning ducts which aid in abetting static during combing and gilling.



STATIC brought on by dry atmosphere caused a jam in this intersecting gill while air conditioning apparatus was temporarily shut down for maintenance. Though quickly rectified due to easy accessibility of machine's parts, the jam points up the importance of controlled humidity. Sliver is drafted in three stages of Warner & Swasey pin drafting equipment (right), after post-combing.

been achieved. Normally, these gills are available in two, three, and four sections.

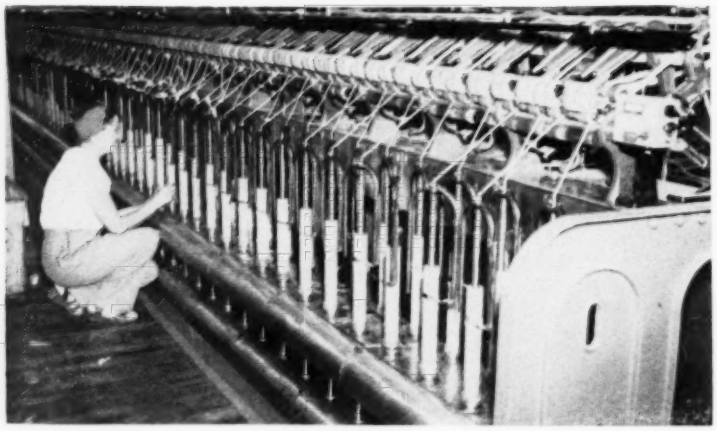
The precombing gills, powered by 10 hp motors, are especially adapted for high production and are equipped with stop-motions on creel and delivery. The cans are the large 36″ x 15¼″ size which cuts down piecing and handling.

The late model Isotta Fraschini gills at High Rock are rated at 25 per cent higher output than older models. The five-head gill has five deliveries of two ends per head doubled into one coiler. The seven-head gill delivers two single meche bobbins per head for a total of 14 bobbins. Revolving funnels provide a false twist to the sliver which does not interfere with combing but keeps the fibers from separating. The balling motion cross-winds with a 13¾″ stroke for 16″ bobbins.

Drafting rolls are located sufficiently close to the fallers so that the resulting nip can hold short staples. This has been accomplished by reducing the diameter of the draft rolls to 1¼″ and using coarse helicoidal flutes.

The purpose of pre-comb gilling is to parallelize the fibers after carding, thereby preparing them for thorough combing at high speeds and uniform weights with a low noil loss. Where converter tow is processed, it is bypassed around the cards for direct feeding to the five-head gill where dandruff, bonded fibers, and like imperfections are extracted.

Combing. High Rock uses a ball



ROVING being made on this long draft Saco-Lowell SF-4 slubber will end up as an 18s worsted count after one long draft spinning operation.

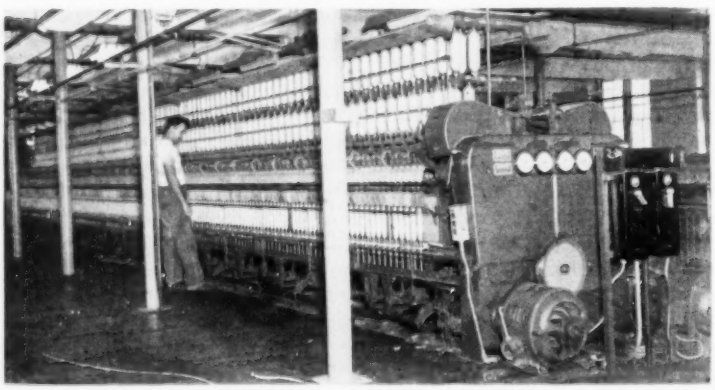
creel rather than can creel on the combs as a matter of space saving. 24 or 32 bobbins are creeled for each comb, depending on whether it is the 13" I.F. or 19¾" S.A. comb. The narrow combs are capable of producing 15 to 16 pounds per hour at 110-115 nips per minute while the wide combs yield up to 19 pounds per hour. The stable, monoblock construction of Isotta's combs is mainly responsible for trouble-free, vibrationless performance at these high speeds. Delivery rolls, fallers, and feed rolls are lubricated automatically.

High Rock's unique central noil collector (a pneumatic system connecting each comb) relieves operators of the time consuming task of emptying noil boxes, thereby boosting the number of combs one operator is capable of tending. Present work load is eight combs per operator with two rows of four facing on a common aisle. One man is assigned to noils as a part-time function which takes in cleaning the waste collector and bagging the noil. Noils generally amount to approximately 15 per cent of production, but usually on the low side due to precomb gilling.

Precautions in combing are few but never neglected: needle bars with missing pins are immediately replaced; pins on top comb and half laps are kept in best working condition with regard to shape, length, and surface; and the entire machine is kept free of excessive fly.

Each comb is independently driven by a 1 hp motor. The starter panel for comb motors is located on a side wall.

ISOTTA FRASCHINI FRAME, one of the few in this country, is an important machine in High Rock's long draft spinning department.



Post-Combing. Intersecting gills employed in the post-combing operation are similar to pre-combing gills with certain differences limited to pinning, size and number of heads, number of deliveries, and creel arrangements. High Rock uses a five-head intersecting gill with can creel and can delivery. On occasions, comb stock is gilled twice for maximum evenness. Ordinarily, one gilling is adequate. Eight ends are doubled with a draft of nine at moderately high speeds. A 7½ hp motor powers the gill.

Humidity in the entire combing department is regulated at a constant 70% rh by Air-Perme-Ator equipment. At this humidity, static trouble is virtually eliminated. Rubbing aprons on this last gilling machine produce a firmly condensed sliver for better processing at higher speeds and drafts in the next operation.

Pin Drafting. Three stages of pin drafting on Warner & Swasey units prepare High Rock's sliver for long draft slubbing and spinning. The first two stages are dual head, and the final Pin Drafter is a quad-head. All are can creel and can delivery. The high speed drafting of heavy slivers and the fine control of blended fibers through the pins of these machines make pin drafting a valu-

LENGTHY 10½" RATCH, available on the Isotta Fraschini frame, is indicated by fixer. This unit is ideal for spinning a wide assortment of staple lengths in blends.

Common Salt and Glauber's Salt Interchangeable in Acid Dyeing Wool, AATCC Reports

Common salt (sodium chloride) and Glauber's salt are interchangeable in the acid dyeing of wool, theoretical and applied investigations conducted by AATCC and sponsored by International Salt Co. have shown.

Approximately four times as much common salt as Glauber's salt is used to obtain equivalent levelness of dyeing, AATCC Textile Bulletin No. 3 states, the exact ratio depending on the dyeing formula.

Substantiating these conclusions is the test wherein the entire production of a mill was placed on common salt formulations for more than three months. Seven thousand pieces were dyed with common salt in the bath. Results with common salt were equally as good as previous production with Glauber's salt.

More Valuable Ratio Sought for Classification of Cotton Fibers for Maturity

Because of the inadequacy of the sodium hydroxide method for the determination of cotton fiber maturity (using the 0.50 ratio of wall-width to lumen-width), a study was made to develop a more valuable ratio for the classification of cotton fibers (according to their wall-development or maturity) to replace the present standard ratio. Results of this study are contained in a recently published United States Department of Agriculture report entitled "An Evaluation of Various Ratios for Classification of Cotton Fibers for Maturity."

Immature fibers are believed to contribute significantly to the formation of neps. So it was hoped that when the degree of wall-development occurring in neps was determined, a more valuable ratio for classification of fibers according to wall-development or maturity would be apparent.

Summary and conclusions of the report indicate:

(1) Exact cause of any nep in cotton is very difficult to determine because of inability to see through mass of fibers which comprises a nep, and fact that when a nep is disentangled several possible contributing causes can usually be found.

(2) For both neps and raw cotton, shorter cottons studied contained more fiber fragments than longer cottons.

(3) More than twice as many mature fibers as immature fibers and more than half as many fiber fragments as immature fibers were found in the 100 neps studied. Ten neps contained no immature fibers.

(4) Cause of neps in shorter cottons appeared to be a combination of factors rather than principally immature fibers, as was the case for the longest cotton examined.

(5) Regardless of which ratio was used, percentages for maturity followed same general pattern for all samples except one which was consistently more mature for fibers included in neps than was its relative position for raw cotton.

(6) It was found that the present standard ratio of 0.5 fiber cell-wall thickness in relation to lumen-width is as valuable as any of the experimental ratios for determining maturity by the sodium hydroxide method, and it is easier to apply than were the experimental ratios.

(7) Abnormalities do not explain variations in neps in card web.

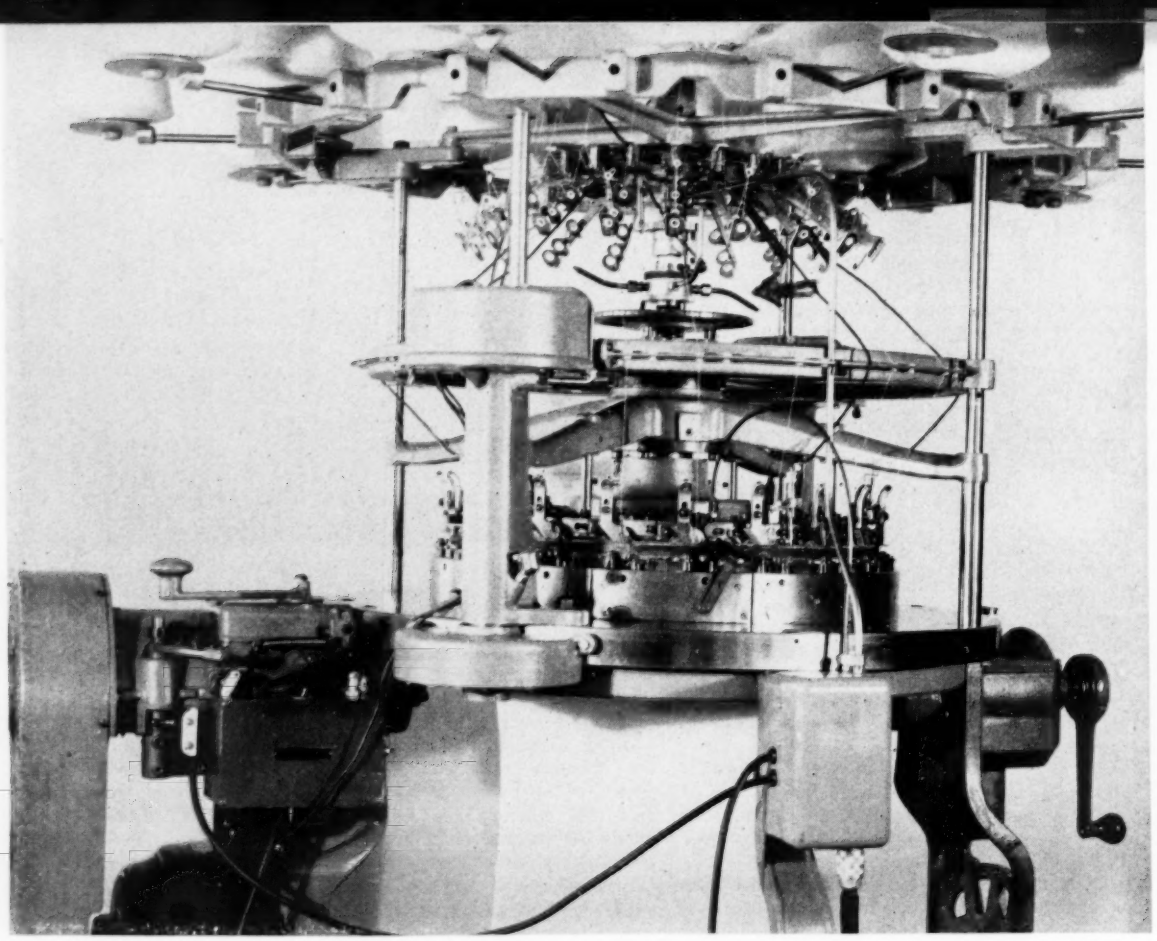
able adjunct of this mill's spinning facilities. Less space, less labor, less doublings, less piecings, and less waste were the criteria for selecting pin drafting systems.

Roving and Spinning. High Rock carries out French combing to a logical conclusion on long draft slubbing and spinning frames. This machinery traditionally is known in cotton mills for its high efficiency and favorable work load potential with respect to creeling, piecing, and doffing. During drafting, aprons on these frames exercise precise control over mixed fibers and staples in the blend, thereby continuing the degree of spinning perfection that started in the gilling operation—a positive fiber control is obtained from start to finish.

For slubbing, Saco-Lowell FS-4 machines are used. Drafts range from 10 to 15. 45-grain sliver is fed single, delivering a 3.0 hank roving for 24s worsted or 2.25 hank roving for 18s worsted.

Roving is doubled on the spinning frame where drafts of 11 are favored. Spinning frames are Saco-Lowell converted, 128 spindles per side.

Also in the line-up is an Isotta Fraschini 400-spindle frame with 3″ gauge, 2″ dia. rings. One of the very few installed in this country, the I. F. frame is designed for variable fiber lengths from 1″ to 8″. The draft assembly (five rollers and a leather apron) permits adjustable pressure on the feed roll. Above the feed roll there are pressure rolls with a pivot mounted on ball bearings. Pressure is adjusted by setting a screw on a cylindrical spring, thus allowing processing of twisted or untwisted slivers. Pressure is also adjustable on the rollers above the draft rolls. The four carrying rolls (⅝″, 25/32″, 25/32″, 1 1/32″ dia.) are placed in saddles on the upper arm of the assembly so that when the arm is lifted, all four rolls are raised.



REVOLVING AIR-VALVE is applied to the top of the center spindle on this revolving cylinder machine. Four copper tubes project from the revolving air valve, directing air towards the top of the dial gear guard, needles, yarn guides, top stop motion, and top of bobbin stand. The air-valve is supplied air from the control unit by a length of copper tubing. Tubing going to the cap is plastic so that the section to which it is attached may be removed without uncoupling the tube. This tube keeps the dial and cylinder needles clear.

Clean Knitters Automatically

Continuous lint removal by a compact air-control unit marks a new era for knitting machine cleanliness and efficiency at Ware.

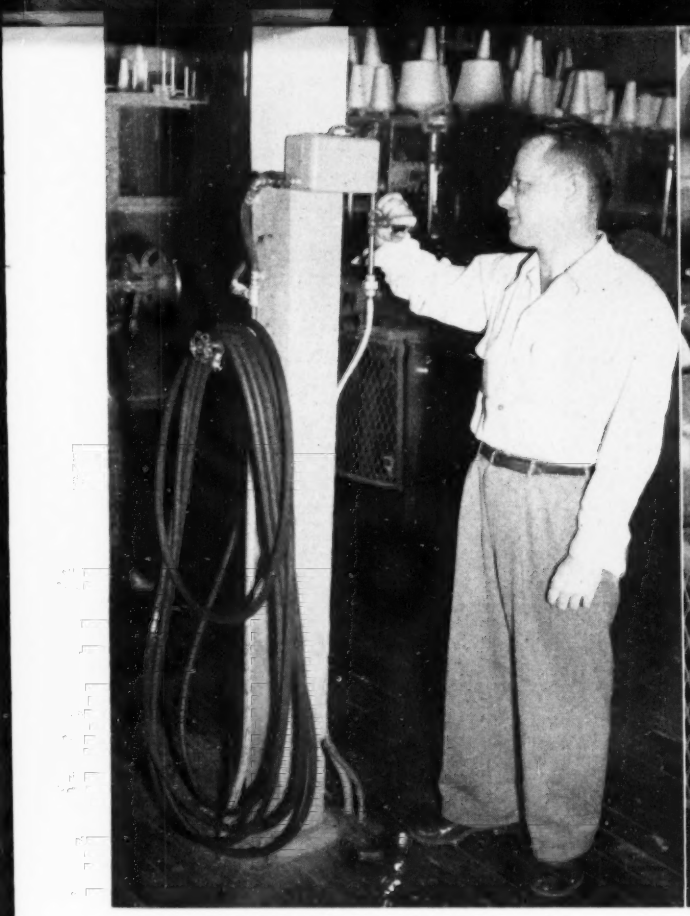
Staff Prepared
EXCLUSIVE

ACCUMULATION of lint fly could be a prime cause of seconds when a knitted garment is made up. This is particularly true when knitting machines are running side by side on light shades or bleached goods and dark colors.

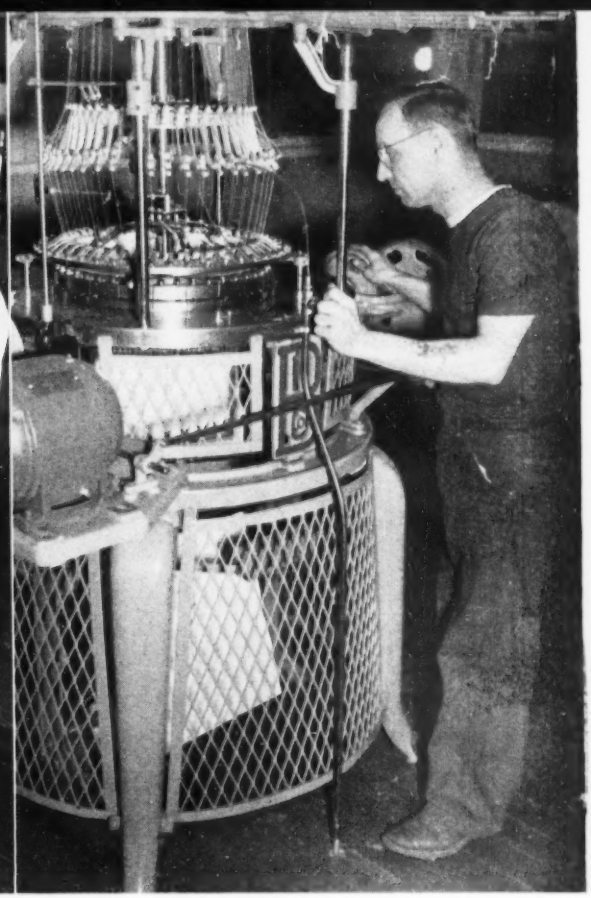
Ware Knitters, Inc., of Ware, Mass., encountered the problem and met it squarely with an air cleaning attachment that can be used on revolving cam ring and revolving cylinder knitting machines. It is proving to be a major contribution towards higher knitting efficiency at Ware.

Essentially an electric timer and a solenoid-operated air valve, the attachment delivers a mild blast of air toward troublesome lint collection points on the knitting machine. The blast is for a short duration and is repeated at regular and frequent intervals. The pulsating air flow is continually working to prevent any accumulations of lint on yarn carriers, needle latches, and slots in outer edges of cylinder and dials. It does this so effectively that the air hose, formerly used for this purpose, is gathering cobwebs.

The air hose at Ware had several strikes against it from the start. In use, it usually aggravated the lint problem by loading the immediate area with floating fly



ONE AUTOMATIC AIR CONTROL UNIT can be rigged to service several knitting machines. Here, William T. Hyland, knitting superintendent, opens main valve in air line leading to a group of six Brinton machines.



FLEXIBLE AIR TUBE is projected into the knitting head where the stream of air is directed towards the needles on this multiple-feed, revolving cylinder Brinton. The operator is shown opening the pet-cock of the air line leading from the automatic air control unit.

which was destined to contaminate surrounding machines. It showed up as specks or slubs in the finished goods, especially where colored and white goods were run on adjacent machines. Furthermore, because of the relatively long intervals between air hosing, lint collected in such proportions that the down time for cleaning was inordinately long and the final cleaning not anywhere near final. The net results were excessive stoppages, lost production, and machine damage.

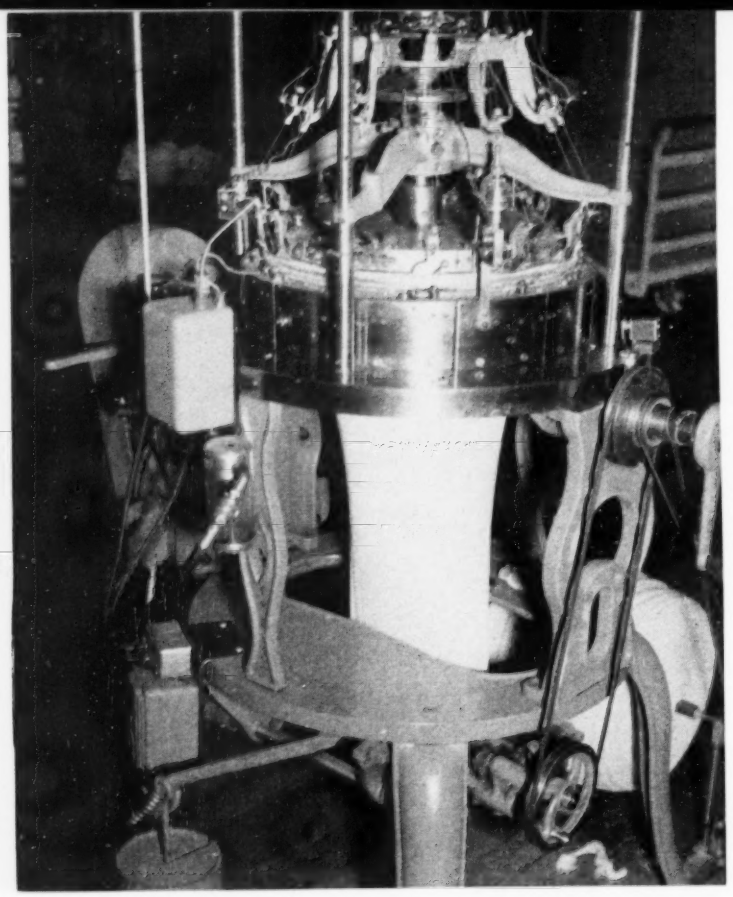
Description. The air cleaning attachment consists of a Telechron clock motor engaged with a control cam. This motor, when attached to 110-volt 60-cycle current, makes one complete revolution in two minutes. The control cam contacts a micro switch which makes and breaks the circuit. When the circuit is closed, the solenoid-operated air valve allows air to flow through the unit and to the machine. When the circuit is open, the solenoid air valve is then closed, and there is no flow of air to the knitting machine.

The amount of time that the cam is in contact with the micro switch may be set by adjusting the switch itself, up or down, with adjusting screws. The micro switch is drilled with oversize holes so that when it is pushed up, the interval that the air is on is extended; and when the switch is dropped down, the interval is shorter. An interval of seven seconds for air flow has been found most satisfactory.

A second micro switch is provided at the controls of the knitting machine so that when the machine is not in operation, the automatic air unit will be shut off. This prevents wasteful blowing of air on the machine when it is not running.

When the air unit is used on a revolving cam ring machine, two copper tubes project from the unit itself, with one directed at the dial and cylinder needles, and the other at the lower stop motion. A dial and cylinder brush is attached to the cap and cam ring, respectively, and as these pass in front of the air stream, they are cleaned off. This arrangement keeps both the work areas of the dial and cylinder needles clean. Also, the yarn carriers are kept clean as they pass in front of the air stream directed at the needles.

The same control unit installed on a revolving cylinder machine is equipped with an additional revolving air valve applied to the top



AIR CONTROL UNIT is mounted on a Scott & Williams revolving cam ring interlock machine in this application. Two flexible nozzles are shown protruding from the unit. One is directed at the yarn carriers and the other services needle latches and slots in outer edges of the cylinder and dial. An advantage of this type of mounting is that the control can be regulated to deliver the optimum air supply for the machine according to the type goods being produced.

of the center spindle. Four copper tubes project from this revolving air valve. These are directed at the top of the dial gear guard, needles, and yarn guides, top stop motion, and top of the bobbin stand. The unit is connected to the control by a piece of copper tubing.

The tubing going to the cap of

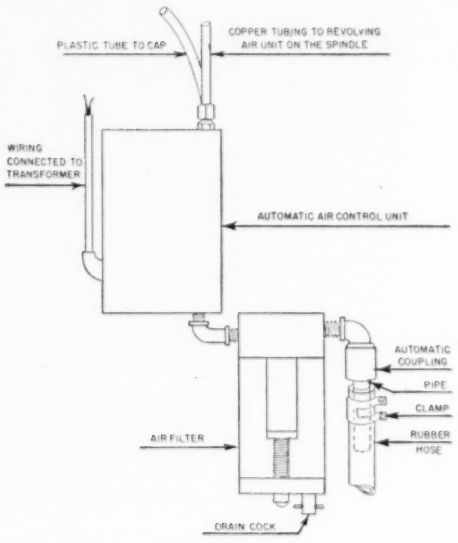


FIG. 1. Automatic air control unit along with a visual air filter. The filter is used to make certain that water, which might collect in the air system, is not blown into the dial and cylinder. The drain cock on bottom of filter is opened by operator when required.

FIG. 2. A sketch of the inside of the automatic air control unit. A Telechron clock motor completes one revolution every two minutes, causing the control cam to contact a micro switch which makes and breaks the circuit. When the circuit is closed, the solenoid-operated air valve allows air to flow through the unit.

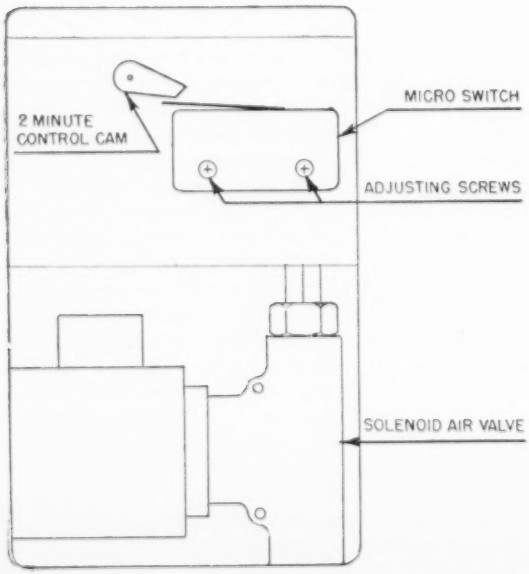
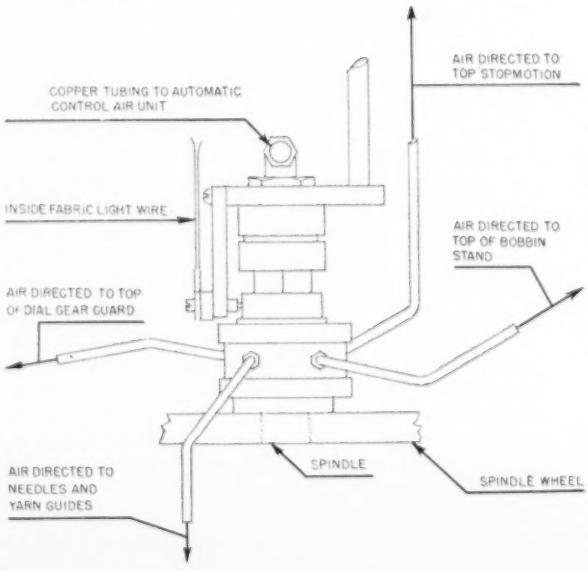


FIG. 3. The automatic control unit, when used on a revolving cylinder machine, has an additional revolving air valve attached to the top of the center spindle. Four copper tubes projecting from the valve are directed at the top of the dial gear guard, needles and yarn guides, top stop motion, and top of the bobbin stand.


AIR DIRECTED TO TOP STOPMOTION
COPPER TUBING TO AUTOMATIC CONTROL AIR UNIT
INSIDE FABRIC LIGHT WIRE
AIR DIRECTED TO TOP OF BOBBIN STAND
AIR DIRECTED TO TOP OF DIAL GEAR GUARD
SPINDLE
SPINDLE WHEEL
AIR DIRECTED TO NEEDLES AND YARN GUIDES

the revolving cylinder is made of plastic so that the section to which it is attached may be removed without uncoupling the tube. This latter tube goes into the cap and directs a stream of air out under the cap, thus keeping clear the dial and cylinder needles.

Compressor Requirements. The air control unit is very efficient in that the air is on for a period of approximately seven seconds each two minutes. A manufacturer of air compressors, after test, found that a 5 hp unit could take care of 20 of the automatic air controls. This figure is considered conservative and includes a desirable safety factor. Should the same amount of air be on continuously, it would take more horse power to supply the air.

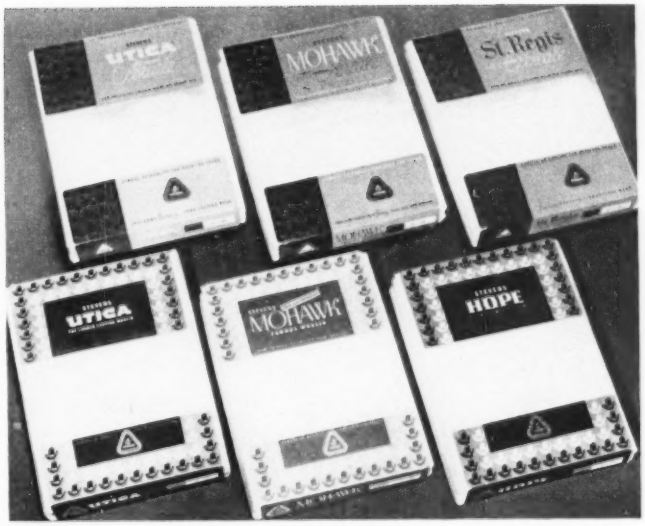
120 pounds pressure is developed at the compressor at Ware. The pressure falls off considerably by the time it reaches the control units; however Ware has found that one unit can accommodate six machines simultaneously. A bank of six Brinton revolving cylinder type machines has been set up to be controlled from one unit.

In operating the unit, it has been found best to stop the air flow when the machine is not in operation because yarn may be blown around the yarn carriers.

Maintenance. The unit, manufactured by Scott & Williams, requires very little maintenance, if any. Occasionally, water must be drained from the visual air filter by an operator.

Other Factors. Using one of the air units per machine, regardless of the number of feeds, only one general cleaning each eight hours is necessary. Very little air is required to keep the machine lint-free, once the control unit takes effect. The air delivery can be regulated according to the type of work being run on the machines. Little electric current is used.

Ware also attributes its cleaner, lint-free cuts of knitted fabric to its 15-feet-high knitting room and the wide intervals between machines. Under these conditions, eddys of air carrying lint from the machine are usually dissipated before reaching the adjacent knitter.



STRIKING LOGOTYPES AND INDIVIDUAL COLORS make the newly packaged Stevens Utica and Mohawk line of sheets and pillow cases easily identifiable by brand. The colors of the packages were so selected that they harmonize with pastel sheets as well as with white ones. Different shades further distinguish between the percales and muslins.

Effective Packaging Pays in Many Ways

The merchandising and sales possibilities of effective textile packaging are pointed up in the repackaging of the J. P. Stevens & Company's Utica and Mohawk line of sheets and pillow cases.

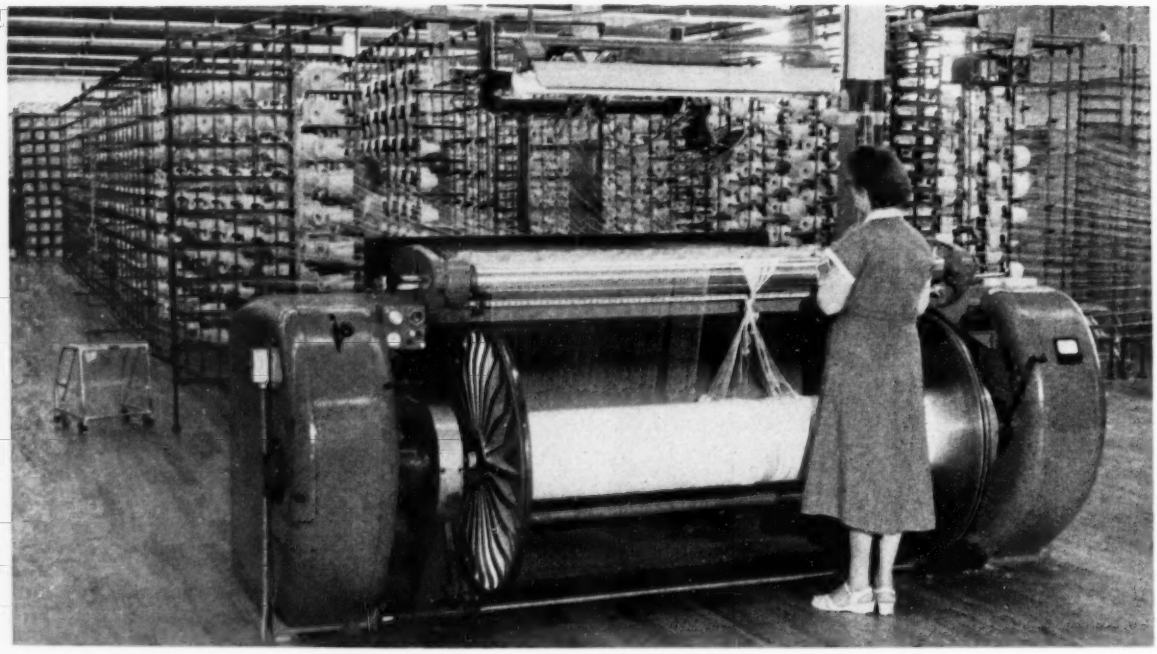
In redesigning the packages, Koodin-Lapow Associates, packaging consultants, developed a trade mark and symbol to establish strong family identification for all brands of the Utica and Mohawk line. Previously, sales had suffered because the packages for the various brands bore almost no resemblance to each other. The new symbol — a Phoenician ship — adds historical authenticity to this textile line, for the Phoenicians introduced textiles to the western world. The symbol also is used effectively in different patterns to distinguish between the company's percales and muslins.

In addition to providing family identification, the packaging is designed to help sell the sheets and cases by effectively displaying them, by emphasizing the quality of the merchandise, and giving complete information and instructions.

This repackaging offers evidence that a thorough textile packaging program goes much beyond the design of a salable package. The packaging consultants conducted research into all major factors pertaining to the wrapping, storing, shipping, display, and selling of Stevens Utica and Mohawk sheets and pillow cases and those of the firm's competitors. The recommendations they made as a result of these studies enabled Stevens Utica and Mohawk to wrap its packages automatically, provide sharper identification of the merchandise between plant and retail store, assure its arrival in better condition, and make possible more efficient use of storage space.

The biggest packaging problem discovered was that the sheets and cases of each brand were put up in a great many varied sizes and shapes of containers. This situation prevented effective combining of sheet case sets, created awkward reshipping packages, and made it difficult to stack the packages at the plant, at warehouses, and in department stores. In addition, the cartons had been hand wrapped, which meant costly

(Continued on page 231)



No lost ends, faster tying-in with

Osage's Quick-Stopping Warper

The new Cocker warper at Osage Mfg. Co. requires less attention and features new design of magnetic brakes.

Staff Prepared

EXCLUSIVE

OSAGE MANUFACTURING CO., a subsidiary of Reeves Bros., Inc., located in Bessemer City, N. C., has had one of Cocker Machine & Foundry Company's new, Model SD-49, spindle-driven warpers in operation for over a year. Alongside the new warper is an older model, and this circumstance makes it convenient to compare the performance of the two in this particular mill.

Osage is engaged in spinning synthetics and synthetic blends and in weaving these yarns, along with some filament yarns, into plain and fancy suitings of high quality. The two warpers are used for warping spun yarns, but some filament yarns are also run on them. Both warpers are operated at about 450 yards per minute on spun synthetic yarns and at about 260 yards per minute on filament. However, the new warper has a speed indicator built into it, and the old one does not, so the speed of the old one is not as accurately known.

The new warper is designed to carry a beam with a larger head. The head is 36 in. in diameter as compared to 28 in. for the old beams, and about 25,000 yards of a 400-end, 24's 2-ply warp can be wound on each of the beams. This increased beam capacity reduces the operator's work because doffing is less frequent. However, the new warper will also accommodate 28-in. beams.

Magnetic Brakes. The new machine uses magnetic brakes as designed and built by Warner Elec-

tric Brake & Clutch Co. The adoption of these brakes is one of the major features of the new warper. Three brakes are used, one on the delivery roll, one on the presser roll, and one on the jack shaft. The brakes are synchronized so that they act together.

Action of the brakes is very quick and is such that the braking is gradual, and there is no slippage of the warp over the presser roll. At Osage, the overseer of preparation demonstrated how quickly he could stop the new warper; and at full speed, the warper was stopped in less than one revolution. The old model turned between two and three times before coming to a complete stop. The new warper has never given any trouble by slipping, despite the quick brake action.

The quick stop is an obvious advantage to the operator. Ends do not get lost, and tying-in is much faster.

Creel. The creel used with the new warper also offers advantages, particularly in setting up mixed designs. The creel is straight instead of a staggered design, and the operators require less time to thread mixed warps. Also, the new warper threads through an eye board and one comb instead of threading through a double comb, and this makes it easier to thread.

Maintenance. There has been very little maintenance required on the new warper, the only trouble so far encountered being some damage to the ends of the presser roll as the result of incorrect loading of empty beams by inexperienced operators. Aluminum bands about an inch and a half wide have now been strapped around each end of the presser roll, and the bands have helped reduce damage from this cause. Also, new operators are shown how to avoid hitting the presser roll with the beam flange in loading.

Time Saver. The overseer of preparation stated that the new warper is the equivalent of the old type plus an extra operator. In other words, creeling, piecing-up, and doffing now require only about half as much time.

"Tax Aspects of Life Insurance"

Many insurance programs are now falling far short of their expected value because of improper tax planning, according to an analysis made by the Research Institute of America for a group of business executives.

The income and estate tax picture has expanded the usefulness of life insurance far beyond its traditional purpose, according to the analysis which is titled "Tax Aspects of Life Insurance," because insurance now offers major tax savings which are not available through any other source.

The Institute says that where properly handled, insurance can lower tax on income, convert ordinary income into capital gain on which the highest tax rate is 26%, or convert otherwise taxable income into exempt income. As a result, a capital fund in the form of insurance proceeds can now be built up at a smaller tax cost than many other investments.

As an example, the analysis cites the substantial tax differences in various ways of receiving endowment proceeds, depending on whether the policy matures while its owner is in a high tax bracket, during a low income or loss year, or when the owner is no longer in a high bracket.

In outlining the tax adjustments to consider, the Institute cautioned that there are tax "pitfalls" to guard against.

The Institute recommended that even where insurance programs are fairly well established, a revaluation of the tax aspects may now effect a greater return.

Executives and Foremen Differ Regarding Supervisory Needs

Executives and foremen are further apart today than they were a year ago in evaluating supervisory needs, the Research Institute of America reports.

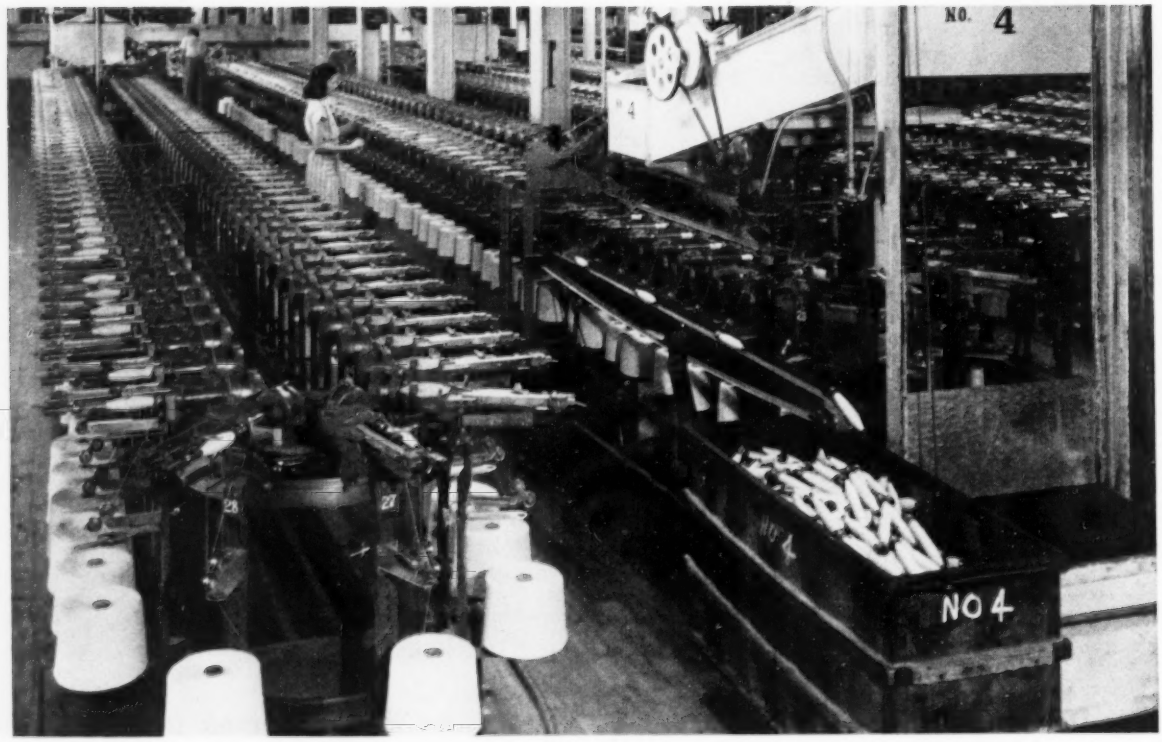
An Institute survey made last year showed the two groups at odds on specific problems but agreeing on three areas in which foremen need information: 1st, human relations; 2nd, operations and procedures; 3rd, economics. A similar survey this year shows that human relations, still rated first by supervisors, has dropped to second place for executives, while operations and procedures, ranked third by foremen, are rated most important by their superiors.

The Institute, which analyzes economic and industrial problems, sent executives and supervisors identical questionnaires in 1952 and again in 1953 covering the subjects they considered most important for the supervisors.

A "surprising" increase in interest among supervisors in economic information was noted. Executives place this third, as both groups did in 1952; supervisors now rate it second. Institute analysts attribute the shift to the "election campaign which stimulated a general public interest in economic matters now being reflected by supervisors, and to international crises which sharpen concern over national affairs." They expect this trend to continue.

These shifts have added significance, the Institute believes, because each of the three "subject areas" actually represents a cluster of topics. "Economic information," for instance, included topics like the international situation; business finance; statistics, with supervisors rating their need for information on all three of these specific subjects higher than executives rated the supervisor's need.

These shifts deserve all the attention top management can give them, the Institute points out, since "at the very least, they imply that higher management is either losing touch with front line needs or is more aware of what supervisors need than the supervisors themselves. In either case the first step toward improving the situation is better communication between the two levels."



Photos courtesy Abbott Machine Co., Inc.

Mill man cites factors to consider when

Changing to Rewound Filling

ANNISTON (Ala.) Manufacturing Company has converted from frame wound filling to rewound filling, using Abbott automatic winders and Abbott quillers. The purpose was to reduce costs of doffing by using a larger spinning package and to reduce costs in weaving through employment of fewer battery tenders when a longer running filling package was made.

Experience to date indicates that the investment in necessary changes and equipment will be amortized in five years—a 20% return. Essentially, the savings are realized by having three less battery tenders on each shift, a total of nine for the three shifts being run.

Staff Interview

EXCLUSIVE

Although the expected reduction in doffing cost has been made, this particular saving is offset in the cost of winding and quilling. Even so, Homer Roberts, general manager, feels that he is ahead of the game and that the investment is worthwhile.

As with any major change in a textile plant, some unforeseen problems arise that do not become evident in short tests and trial runs. Mr. Roberts, who has for years participated in open forum technical meetings where practical information is exchanged, believes that some of the findings which resulted from his experience with the change-over may be helpful to other mill men who contemplate making a similar installation.

Employee Reaction. At first, when the change was explained to the employees, they were concerned that they or their friends would be without jobs. Management assured the operatives that such would not be the case, but that any reduction in number of employees would be taken care of by normal turnover—those that had jobs would continue to have jobs with the mill.

The policy was rigidly enforced and the worries of the employees on this score disappeared. For instance, when the spinning pack-

age was changed from 1 9/16" to 2", 2¼", and 2½", fewer doffers were needed, but no one lost his job. Other departments and further mill conversion work absorbed surplus doffers.

Size of Package. Anniston makes filling numbers which range from 11s to 16s. It was thought that a filling quill weighing 2.10 ounces could be made, because preliminary tests and small-scale operations so indicated. However, in actual production the average weight is 1.85 ounces.

Although the lower weight is still good and one that permits savings, Mr. Roberts points out the difference that may be expected. He also admits that it is possible to get the expected 2.10 ounces by putting more tension on the yarn in the quillers; but for full-scale operations he considers it better practice to use less tension and get less yarn on the quill and have fewer breaks, than to have more tension and more breaks and a longer running quill in the loom.

This, of course, Mr. Roberts explained, is an operational decision based on conditions at his own mill, and the same decision may or may not be reached in another plant.

Handling Pieces. Depending on the conditions at a particular mill, provision should be made for the handling of quill pieces, unless they are to be filled in the batteries along with full packages. This is necessary because a piece will be made when the supply cone runs out or when the yarn breaks.

The number of pieces made will depend, of course, upon a number of factors in each mill, such as yarn number and break factor, tension applied to yarn in winding, size of supply package, and condition in which the quiller is maintained.

Maintenance of Quiller and Uniformity of Package. Maintenance of the quiller is directly reflected in the uniformity of the package size. As an example, both case hardened and nylon feeler tips, which govern the build of the package, will wear*. As they wear, they must be changed. Unless, of course, the mill does not object to some unevenness in the package. Again, the choice must be made by management between lower maintenance costs and an uneven package, or somewhat higher maintenance costs and a uniform package.

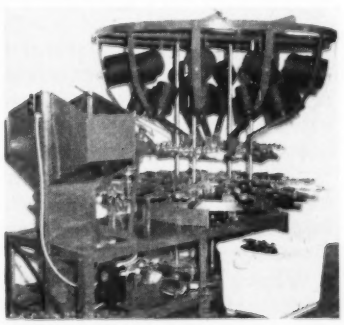
Quiller Changes for Different Filling Number. Another factor that may be considered is the frequency with which the mill will change filling numbers. Should the plant remain on one or two numbers, the problem is simplified. However, if small amounts of different numbered fillings are needed, time is lost in changing the tension at the quillers, and often more yarn than actually needed must be made in order to have supply packages for all heads on the quiller.

Short runs are possible on the automatic quiller, but when they are short, the production of the quiller is reduced. Thus, management again must decide between making more yarn than it needs to get full production on the quiller, or making the amount of yarn required and losing production on the quiller.

Mills equipped with the larger automatic quillers also have the option of using an additional smaller automatic quiller which the same company is now making. It permits winding short orders of filling from a few supply packages.

The training of employees was no problem when the change was made at Anniston.

RADIAL QUILLER which permits winding short orders of filling from a few supply packages.



*The supplier also makes a machine without the feelers, thereby eliminating this particular trouble. Feelers on machines at Anniston Manufacturing Company work in conjunction with saw tooth racks and govern the diameter to which the quill is wound. The "overhead cam type" machine permits the thread guide to be advanced slowly toward the tip of the quill as the spindle progresses around the machine, and the speed at which the spindle moves around the machine determines the diameter of the full quill. The machine was designed primarily for filament rayon yarns where it is undesirable for anything to touch the yarn. It has, however, been adapted to spun rayon and cotton quilling in some mills because it permits higher winding speeds and eliminates the problem of wear on the feelers.

Leno on Dobby Loom Without Doups

Another new device for the improvement of textile machinery has been developed through research in the Clemson College School of Textiles, according to Dr. Hugh M. Brown, dean of the school and head of the research program.

This device produces leno weaves without the use of doups. The arrangement is worked entirely from a dobby head which makes it possible to intermix, pick by pick, plain weave, ordinary leno, full-turn leno or even more than full-turn leno.

The leno action is accomplished by running each pair of warp ends through holes in small pinion gears mounted in a bar behind the harnesses. On each pick the gears are rotated the required number of half turns for the leno desired and stopped with each pair of ends separated horizontally so that the right-hand end in every pair may be either raised or lowered by one special harness, while the left-hand end of each pair may be given the opposite motion by another similar harness.

The rack that rotates the pinions may be operated from two dobby levers and the intermixing sequence set up on the pattern chain. Considerable cross striping effect can be had by intermixing picks of plain weaving, ordinary and full-turn leno. The system is reported to work well on warp end spacings down to one-fourth inch and to be especially valuable for locking a weave having very widely spaced picks.

Reviews Investigations Explorations Surveys Analyses

How to Improve Tear Strength

The seventh article of a series dealing with research work and the practical application of research findings in the mill.

By SIMON WILLIAMS
Director of Technical Information
Fabric Research Laboratories, Inc.

EXCLUSIVE

A MILL treating cotton dress goods with resin to improve crease resistance consistently reduced the tear strength of a particular construction below acceptable standards.

Another mill coating a cotton fabric with resin to make a permanent chintz finish found that not only was tear strength lowered, but the tear always ran across the filling.

A mill coating various fabrics with rubber for rainwear found disconcerting variations in tear strength, even when the amount and thickness of the rubber coating seemed the same.

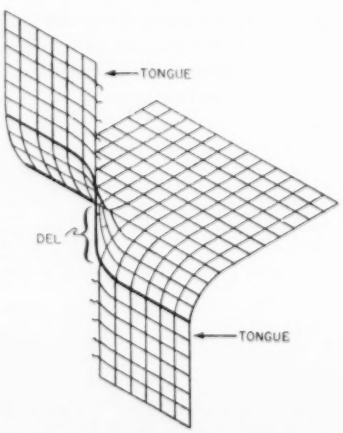
Why?

Can the reasons for these defects be determined—and if so, can the causes be eliminated and controlled?

The answer is yes, but to understand this answer, it is desirable to review the research done at Fabric Research Laboratories leading to an understanding of the mechanism of tear. The application of the theory to the problems noted will be better appreciated and the theory may become more generally useful.

One of the most successful laboratory tests for the study of tear is called the "Tongue-Tear." In this test, a sample 3 inches wide and no less than 8 inches long is cut, either along the warp or along the filling, depending upon which direction tear strength is of concern. From a point at the middle of one end, a cut 3 inches long is made, dividing the fabric into two "tongues."

One tongue is placed in the upper jaw of a loading machine and the other tongue is placed in the lower jaw. Load is then applied until the sample tears.

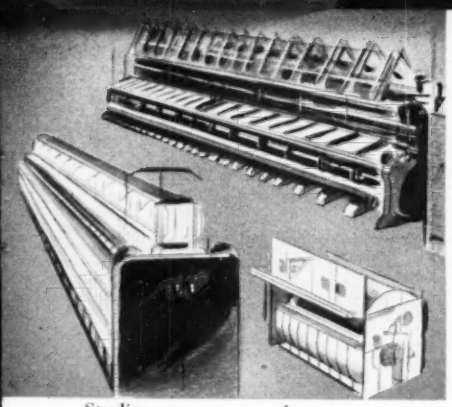


In the accompanying sketch a fabric is shown after some load is applied. In the region around the base of each tongue, an area, roughly triangular in shape, is formed very rapidly in which the warp and filling yarn become pressed together and distorted out of original position. This area is known as the "del" and it is here that tear begins.

From the sketch it may be observed that as the fabric is pulled, the yarns originally at right angles to the direction of loading tend to shift their position in the del, crowding together and getting more and more parallel to the alternate set of yarns (warp or filling as the case may be). As soon as the load gets large enough to rupture some yarns in the del, a new del starts to form just beyond, the tail gets longer, and step by step (del by del) the tear moves along the fabric.

Over the years our laboratories have examined large numbers of fabrics in an effort to determine the factors which influence the resistance of a fabric to tearing in the del. While the mechanism of tear is not yet wholly described, the following general picture seems valid.

Factors Affecting Tear. The amount of tearing load the yarns



Studies Assays

in the del can withstand depends upon at least four factors:

1. Both warp and filling yarns must have the greatest possible freedom of movement, permitting them to enter the del quickly and supplying yarn supporting material.

2. The yarns that in the fabric originally lie at right angles to direction of the tearing force must be as free as possible to swing through 90 degrees and become parallel to the other set of yarns. In this way, the yarns in the del can help support the load.

3. To support the load with maximum efficiency, the yarns resisting the tearing force in the del should have the same load bearing capacity. This means that the yarns in the del which swing into a position parallel to the tearing force should exhibit the same stress-strain relationships up to the breaking extension and should all fail simultaneously.

4. If all other factors are favorable, the stronger the yarns the greater the tear strength.

Yarn Mobility Influenced by Fabric Design. The strength-extension properties of the yarns must be built in by yarn construction, and little can be accomplished to modify these yarn properties by fabric construction. On the other hand, the very critical property of yarn mobility is strongly influenced by fabric design. Fabric Research Laboratories have found, for example, that freedom of movement by yarns into the del is a function of several geometric variables, among them being magnitude of crimp, crimp balance, threads per square inch of fabric, and the length of the yarn float (distance between cross-overs of warp and filling).

The lower the crimp, the smaller the area of contact between yarns and the lower the frictional resistance to movement. The locking action of one yarn crimping around another is exaggerated when one set of yarns (either warp or filling) is much more highly crimped than the other and crimp unbalance must be minimized. The interference with yarn movement due to the addition of more and more yarns is obvious.

However, if the float length is increased, as in a basket weave in contrast to a simple plain weave, the longer free yarn length is more flexible and permits more yarn adjustment. Therefore, at the same thread count per square inch, a basket weave will be stronger in tear than a one-up, one-down plain weave, other factors being equal.

To come back now to the mill problems, the explanation of the defects may be found in the simplified picture of tear mechanics just described.

Explanation of Defects and Correcting the Fabrics. On analysis, it was found that the mill applying resin to cotton dress goods first prepared the fabric for impregnation by a series of wet-dry treatments on the grey goods. During these processes, there resulted a marked crimp interchange. Warp crimp was reduced to a very low value and filling crimp increased to many times the warp crimp. It could be shown that the major loss in tear strength took place *before* resin treatment, even though the original yarn properties were unaffected. That is, yarns taken from the fabric at all stages up to impregnation were identical. Therefore, a control over shrinkages in both directions was instituted to keep crimp interchange to a certain standard, and the tear strength was maintained at a satisfactory level.

The chintz problem involved two basic considerations. First, the resin coating stiffened the yarns, as well as tending to bond the yarns at the cross-overs. Any stiffening-bonding finish will reduce tear strength. With resin treatments of the chintz-finish type this is difficult to minimize and demands the use of base fabrics sufficiently tough to withstand the inevitable loss in tear strength.

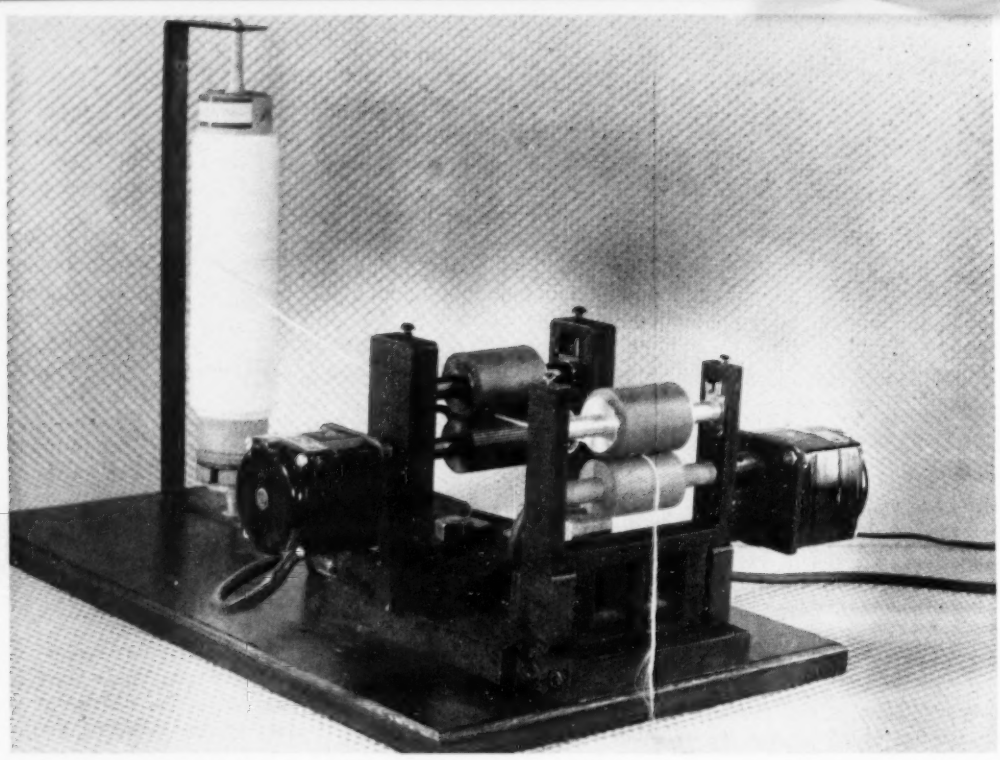
The fact that the tear proceeded across the filling, irrespective of the initial direction of the tearing force, was explained by the fact that the filling yarns used in the base fabric were very much weaker and relatively less extensible than the warp yarns. Therefore, when the yarns began to move into the del, the filling yarns began to break long before the warp yarns, no matter from which side the fabric was pulled. It was necessary here to increase filling yarn strength to a minimum standard to control this defect.

The anomalous behavior of the rubber coated rainwear fabric was related to the degree of penetration of the rubber into the yarns and fabric. The greater the penetration, the more the yarns were fixed or bonded into position, limiting their movement in and into the del.

Two remedies were suggested to relieve the occurrence of low tear. First, every effort to control the viscosity and application pressures had to be exercised in order to keep the coating as superficial as could be and still meet performance specifications. Second, it was suggested that in formulating the coating, the attempt be made to decrease the stiffness of the coating so that under tearing loads, both yarn and rubber coating would freely move.

Research leading to a complete understanding of the mechanism of tear is not finished. Much has yet to be learned and must be learned before tear strength can be predicted and controlled. Yet it is gratifying that as tear strength has emerged from being a matter of little concern to the trade, to a position of critical importance in determining the acceptability of many new finishes and finishing methods, research has been able to contribute successfully to the day to day practical problems.

Basic research, leading to intelligent direction of fabric design and quality control, can be the best insurance for textile prosperity.



THIS INSTRUMENT will give valuable data relating to frictional properties of roving as it affects drafting. Other machines designed to analyze various ramifications of the slip-stick phenomena encountered in filament yarn and staple fiber processing are also described in this article.

Scroop Can Be Measured

WHEN CONTINUOUS FILAMENT YARN is drawn across a needle in a knitting machine, it may set up vibrations due to non-uniformity of frictional forces which act in a slip-stick manner. Similarly, a harsh-handed yarn passing over metal surfaces, guides, yarns, or fabrics in any number of textile processes will produce a musical tone at times. Such yarns are termed "scroopy," and their musical effects are not the kind enjoyed by mill men. To the trained ear it means that irregularities are going to show up in the finished fabric. The Yarn Development Department of the Acetate Yarn Division, Tennessee Eastman Company, has been investigating "scroop." This article describes the progress that has been made.*

WHAT IS the slip-stick effect? It is the squeaking door hinge, the chattering brakes, and the skidding tires. It is also the sing of yarn in motion. Where the effect is quite pronounced in filament yarn, the yarn is described as "scroopy." Scroop is caused by alternate slipping and sticking of two contacting surfaces similar or dissimilar, lubricated or unlubricated. Sliding is not a continuous, smooth process. Surfaces stick together until a gradually increasing pull on one results in a sudden release with a very rapid slip. The underlying cause of slip-stick is the difference between static and kinetic coefficients of friction.

When the difference is large in a weaving operation, for example, barre conditions will show up prominently in taffetas, and to a lesser extent in marquisettes. As the reed beats filling into the fell, harsh yarn will cause irregular spacing of the picks, and streaks will mar the woven fabric's texture. Weavers refer to scroop produced streaks as "raised picks" or "static cracks." In knitting, an uneven stitch is likely. In drafting, weights will vary in waves of periodic frequency.

If the scroopiness of a lot of yarn could be accurately gauged in advance of a mill run, then much grief could be avoided. A soft finish, depending on the degree of harshness, can be applied. This will eliminate the scroopy condition.

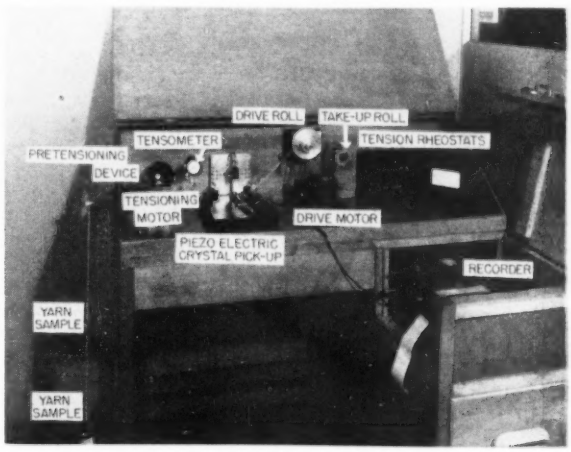
*Based on a paper entitled "Frictional Properties of Filament Yarns and Staple Fibers as Determined by the Slip-Stick Method" by G. W. Bartlett, T. M. Smith, and H. A. Thompson of the Yarn Development Department, Acetate Yarn Division, Tennessee Eastman Company, Kingsport, Tennessee. Presented at a meeting of the Fiber Society.

In the past, common practice among mill men was to test for scroopiness by drawing samples between the fingers, feeling the resistance, listening to the tone. This method is extremely subjective, provides no data for sample comparison, and is not sensitive for small differences. On the other hand, testing the processing qualities of a large lot of yarn by mill trial is expensive, time consuming, and does not allow close control over the finish applied.

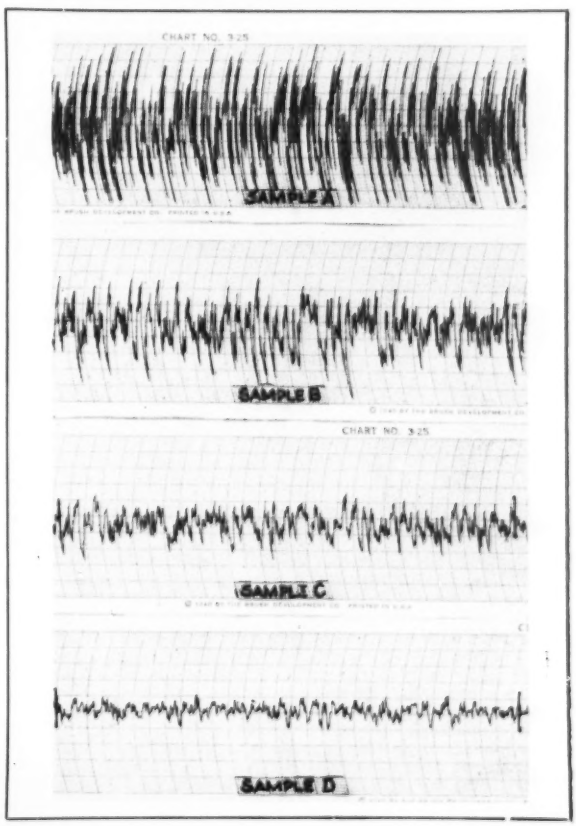
Much work has been done in the investigation of slip-stick effects by Tennessee Eastman Company's acetate yarn researchers. Out of it has evolved a group of instruments for measuring and recording those rapidly fluctuating forces which occur during motion of yarns and fibers. For want of a better name, this new genre of laboratory devices is called "scroop snoops."

Electrical strain gauges and high speed recording instruments have been incorporated into the testing equipment to furnish accurately recorded measurements. From test charts, unusual trends and cyclic variations due to methods of lubrication or wind may be uncovered. These new devices may solve a number of the posing problems in processing textile fibers and yarns. The instruments and their application are described in the panels following.

Yarn Friction Analysis



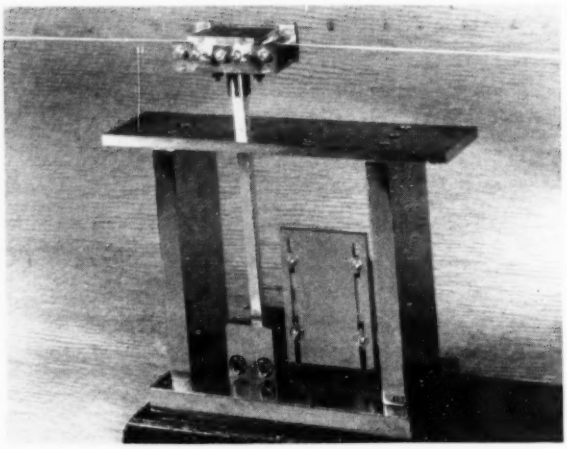
THIS DEVICE yields information concerning friction of yarn against steel or other materials composing textile machine guides. Yarn to be tested is drawn from package with constant speed and tension, in contact with a short length of musical wire. Fluctuations in the forces of friction against the wire cause it to vibrate with an amplitude determined by: (1) the material and dimension of the wire, (2) tension on the wire, (3) the lubricant or finish applied to the yarn. A flat stylus in contact with the wire transmits the forces to a piezo electric crystal pick-up which converts the mechanical motion to electrical impulses that are amplified and recorded by an oscilloscope. Yarn passes through a pretensioning device supplying only enough tension to snub the yarn so that it will not slip as it passes around the pulley of the tensioning motor. The yarn is passed around this pulley in a direction that causes the intended direction of rotation of the motor to be reversed. Tension of yarn is regulated by electrically controlling the torque of the tensioning motor by means of two rheostats in series with the motor. Inertia of the tensioning motor eliminates surges of tension which may have been introduced by the slip-stick effect in the pretensioning device. Yarn then passes around pulleys of a tensometer and over a guide pulley to a transverse section of wire (or other material against which it is desired to test the yarn). Here, contact with the wire is made and the yarn then passes over another guide pulley as it proceeds to the drive roll of a synchronous drive motor geared to the desired speed. Yarn is finally wound on a take-up roll. The pick-up point resting against the wire is chisel shaped and can be adjusted for maximum contact sensitivity by a micrometer screw. The pick-up assembly is shock-mounted to isolate from motor and building vibrations.

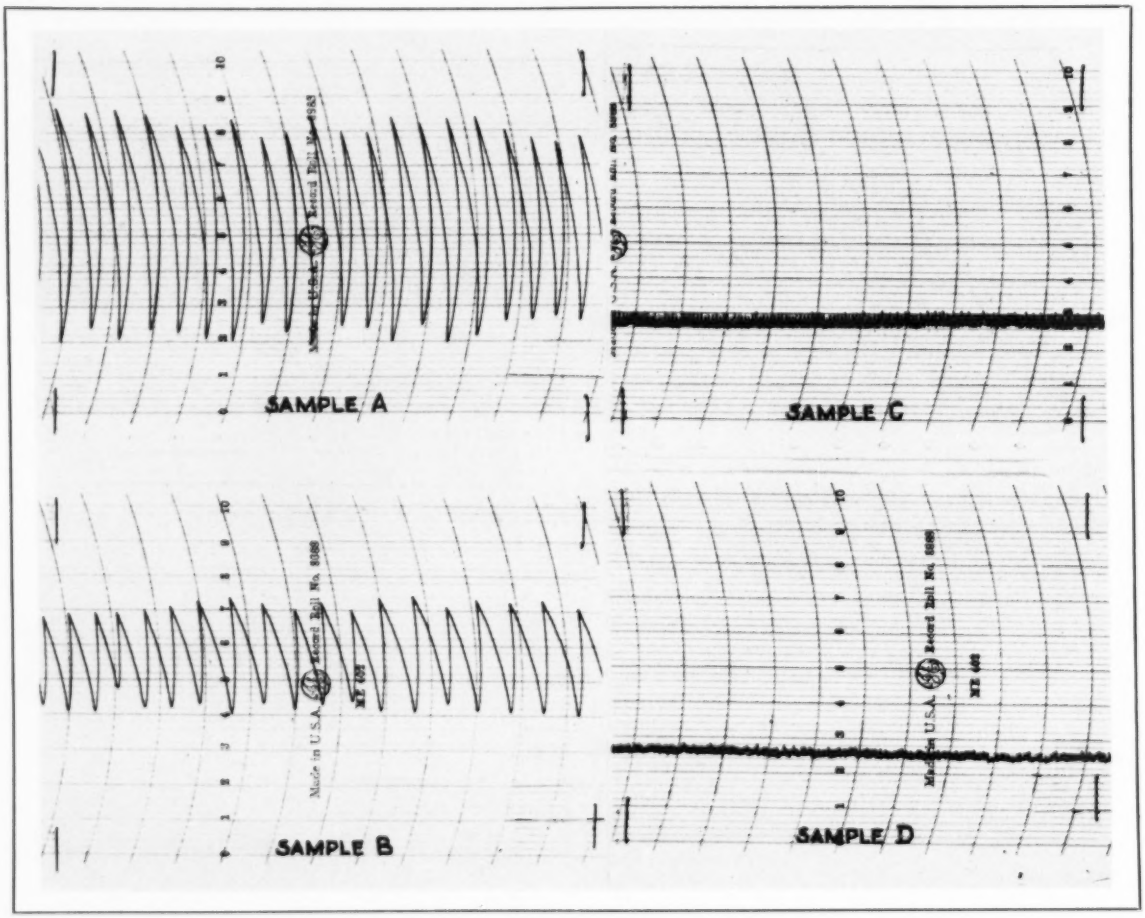


THE DEVICE IS LIMITED to tests on continuous filament yarn, free of slubs, broken filaments, or other imperfections because forces measured are of smaller magnitude than those caused by obvious irregularities in the yarn. For testing lubricants or finishes, selected yarns should be identical in denier, filament size and count, twist, and luster. Sample A is a harsh yarn. Samples B and C are yarns with intermediate values of scroop, and sample D is a smooth yarn. Instead of evaluating charts for quantitative comparisons, there is a procedure for obtaining the average value of the vibrational energy level. The signal is rectified and fed through an electrical low pass filter circuit with a long time constant (integrating circuit). When connected with a recording meter, it amounts to an electronic a-c voltmeter designed to respond to low frequencies. Similar results may be obtained by using a high resistance indicating meter and taking an average of ten or more readings spaced over several minutes. It is possible to reproduce readings within 3 per cent by these methods. *(Continued next page)*

Slow Speed Yarn Friction Analysis

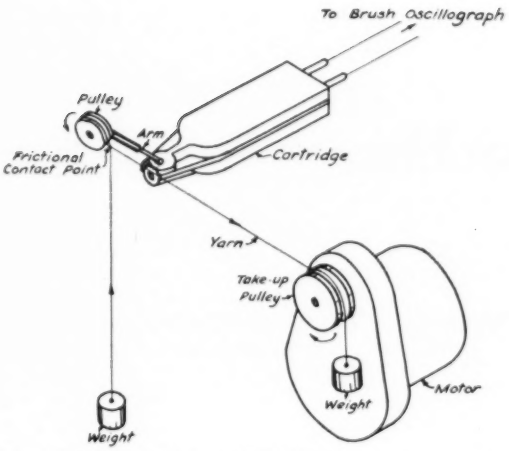
SLOW SPEED FRICTION TESTER allows each individual stick-slip cycle to be thoroughly analyzed. Individual forces are measured by a Statham gauge. Yarn is drawn through at a speed of one inch per minute by a synchronous clock motor (not shown). Tension is applied by gravity using a suitable weight after the yarn passes over a pulley. Five cylinders about 3/16" in diameter, placed to provide a deflection in the yarn of 10 degrees at each contact, comprise the yarn guide by means of which friction is applied. Polished steel, porcelain, and Alsimag can be used for the cylinders. The guide assembly is mounted at the top end of an aluminum lever, the lower end of which is attached to a hub mounted in miniature ball bearings. The force on the lever is sensed by the Statham gauge. The gauge has a sensitivity of 4 ounces with a displacement of only 0.0015 inch and may be lowered or raised to obtain the required lever ratio and calibration. Absolute calibration may be checked by using known weights attached to a length of yarn run over a pulley. Fine calibration adjustment is made by means of a rheostat in the battery circuit supplying the gauge.



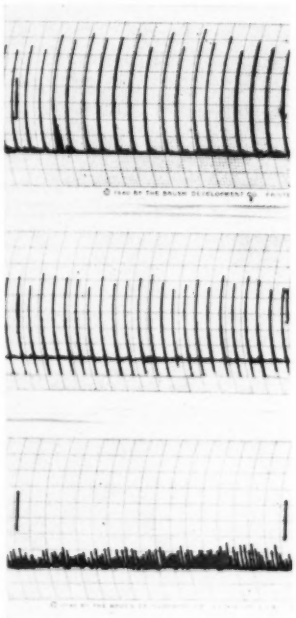


SAMPLE A illustrates the stick-slip effect produced by a harsh yarn. Sample B shows the result of a test on moderately harsh yarn. Samples C and D are relatively smooth. The gradual build-up in force, followed by the sudden slip, repeated in uniform cycles, is readily apparent. The coefficient of friction is directly proportional to the force in grams shown on this instrument and may be obtained by dividing the force in grams by 200. Each chart division represents one gram of force. The coefficient of kinetic friction is the minima of the saw tooth curve while the coefficient of static friction is the maxima. Dividing the former value by the latter yields a smoothness factor, which is really the percentage of the maximum force remaining at the end of the slip. This device has confirmed that: bright yarn has higher chatter and higher average friction than dull yarn; satin finished guides produce less scroop effect than brightly polished guides; frictional characteristics of filament yarn are determined primarily by the finish applied.

Yarn-On-Yarn Friction

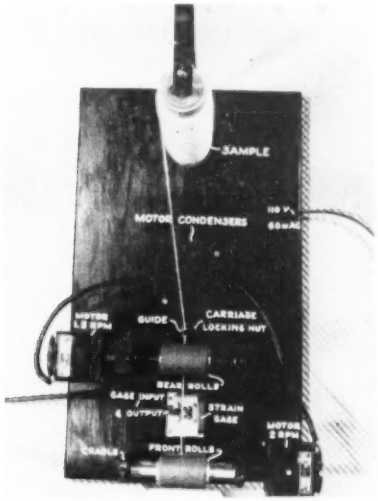


STICK-SLIP CHARACTERISTICS of yarn against yarn are determined by means of the simple device shown here schematically. A small aluminum pulley is mounted on the end of a small rod in the needle slot of a standard piezo-electric crystal cartridge. The angle of the pulley is such that when a weight is supported by one end of the yarn, it rubs against itself as it is drawn horizontally by means of a take-up pulley on a clock-type motor. A second weight serves to snub the yarn around the take-up pulley. The device responds to the mathematical derivative of the force curve. The response is recorded by a high speed oscillograph.



TYPICAL CHARTS obtained from yarn-on-yarn frictions tests. The length of the vertical line at each slip indicates the relative magnitude of the force change. Overshooting of the base line or rest position shows a high degree of relaxation on the slip phase of the cycle. This test is satisfactory for testing yarn moving against itself, but an instrument for testing two dissimilar samples (i.e.; filling yarn against warp yarn) still awaits development.

Fiber Friction in Drafting



CONTINUOUS ROVING TESTER used to study slip-stick effects in interfiber friction of staple fibers simulating the dynamic conditions of mill operation. Drafting is accomplished in one stage with a draft ratio of 1.33:1 at low speed. The front roll system is suspended from a balanced pivoted frame serving as the fulcrum for the drafting force applied to a Statham strain gauge through the frame as roving is drafted. Fluted draft rolls are driven directly by means of small synchronous gear motors. Drafting forces are translated by the gauge into electrical energy measured and recorded with a G. E. recording microammeter. Pressure rolls are rubber covered, and pressure is applied through bearings by means of screws at each end of the pressure roll shaft. Spacing between front and rear roll is adjustable for fiber length.

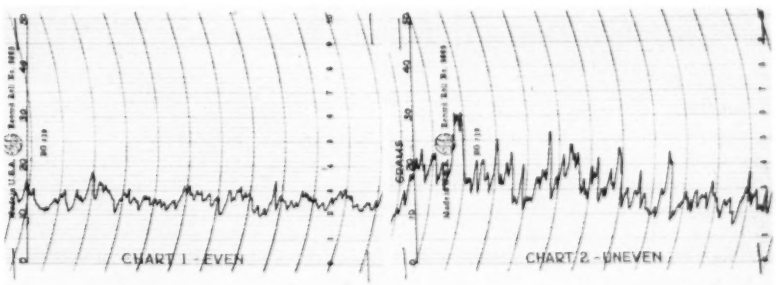


CHART 1 (left) illustrates roving having a relatively soft finish, and Chart 2 (right) shows one with a harsh, scroopy finish. The tester is calibrated so that drafting forces in grams may be read directly from the recorder chart. Results from the tester may be described as a smoothness factor (previously explained under filament yarn testing). Basic properties other than finish must be taken into consideration when analyzing roving tests. These are: staple length; fiber stiffness; roving twist; and luster. Short staple minimizes the slip-stick effect, and staple lengths of five or six inches give pronounced slip-stick effects even with soft finishes. Stiff fiber produces a curve with a lower smoothness factor regardless of whether stiffness is the result of difference in denier, filament, or a material with different elastic properties. When twist is higher than normal, a finish which usually shows a smooth drag will exhibit a single slip of considerable magnitude with no subsequent recovery in strength. Dull staple exhibits higher smoothness factors than bright staple.

The horizon fairly glows with promises for the future under

Dynamic Business--Our

By CRAWFORD H. GREENEWALT
President, E. I. du Pont de Nemours and Company

SINCE THE TURN of the century, the American business system has given our people a standard of living that is the envy of the world. It has made us strong enough to be the global guardian of freedom. The horizon fairly glows with promises for the future.

How far have we come since 1900? The statistics are impressive. Here are a few from a study just published by Professor Frederick C. Mills of the National Bureau of Economic Research:

1. During the decade ended in 1950, we produced five times as much as we did in the decade 1891-1900.

2. This five-fold production required only an 80 per cent increase in total man-hours of labor.

3. The output per man-hour of labor has nearly tripled in the half-century.

This means the American people are producing more wealth with fewer hours of work than our grandparents ever dreamed could be possible. It isn't because we are stronger, bigger, or work faster than our grandparents. New and better tools and methods, the creation of an ever-expanding industrial plant, the unceasing search into the unknown—these have given our people a fantastic reward.

Progress in Living Standards. The material benefits of this quintupled production of goods and services are apparent wherever we look. In food, clothing, shelter, and transportation, and in ease, convenience, and comfort, the standards of even the most modest American home go steadily upward. What is initially hailed as a modern convenience quickly becomes a modern necessity. Where else in the world could an Official Consumer Price Index include such items as television sets and beauty parlor services?

In sociological terms the change has also been marked. Fifty years ago there was a great difference in living standards between the working man and the owner of a factory. They lived in different neighborhoods, wore different kinds of clothes, and had a widely different degree of comforts and diversions.

Today they eat much the same meals. They drive to work in comfortable, dependable automobiles—one may ride in a Ford and the other in a Cadillac, but both travel well. Either may spend his vacation in Florida or in the Rockies. Their homes may differ in size, but they differ little in comforts for the family—both have automatic heating units and modern equipment of all kinds in the laundry, the kitchen, and the bathroom. They wear virtually the same clothes, and so do their wives. Both see the same television programs on the same kind of set, attend the same concerts and ball games. It is the only country in the world where this situation exists.

Since 1900, our life expectancy has increased by nearly a quarter of a century. Diseases which once were almost certain killers have been conquered. American boys and girls go on to college where their grandparents had to start work at the grade school level. The work week has fallen from 60 and 48 hours to a 40-hour standard. Mechanical appliances and revolutionary methods of preserving and packaging foods have emancipated women from the kitchen—and they now take an active interest in business, sports, and civic affairs.

All of these gains are by-products of business progress. If this is disputed by fellow-thinkers of the left wing, let them try to institute by law or government fiat a 40-hour week for the workers of Red China. It would bring rebellion or starvation. Without tools and machinery, the people of China can't produce enough to keep themselves alive without working longer hours. Nor was the shorter work week attainable by our own grandparents. Social reform stems from productivity—it is never the root.

With Business Freedom, Progress Unlimited. Even the boldest of us would have difficulty forecasting the

REPRINTS up to five, free. Larger quantities at cost. W. R. C. Smith Publishing Co., 806 Peachtree St., N. E., Atlanta 5, Ga.

Best Guarantee of Progress

No. 6 of a series on problems of business and government

MR. GREENEWALT, who joined the du Pont organization as a chemist immediately following graduation from M.I.T. in 1922, has had an important part in many of the company's most notable achievements, including its contribution to the government's atomic energy program. Widely recognized as one of the nation's outstanding industrial leaders, he has been president, chairman of the Executive Committee, and a member of the Finance Committee of the du Pont company since January 1948.

full brightness of the future if American business is permitted to continue its development in freedom. There is no evidence that the prophets of 1900 foresaw air-conditioned trains, fine fabrics made from air, water, and coal, super-highways traveled by sleek automobiles, or man-made rainstorms. Certainly they didn't envision intricate industrial plants where workmen watched gauges and were safer from accident than in their own homes. Nor could they have foreseen the splitting of the atom to release energy terrible in war, but with vast potentials for peace.

But even the prudent may assume with confidence that today's industrial laboratories are testing formulas that could bring progress as spectacular in the last half of this century as we have witnessed in the first. For instance, half of the Du Pont Company's sales last year were of products unknown or in their commercial infancy 20 years ago. Yet our company spent $50,000,000 for research in 1952, and will spend at least as much for that purpose this year. Other firms, large and small, attach equal emphasis to the importance of research and development. They must if they are to meet their competition and survive.

Competition a Must. For competition, in the last analysis, is the spark which ignites our business system. There would be no progress if business were content to sell the same products, made in the same way, at the same price to the same markets. If any firm tried to do that in America, it would quickly discover that a competitor had developed a new or better product, or had found a way to manufacture the old product at less cost for sale at a lower price. The customer naturally would buy from the competitor. The standstill firm would go out of business.

As long as men are free to seek reward through their own productive effort, the United States will never cross its last frontier, nor stagnate in a "mature" economy. A dynamic business system is our best guarantee of progress and a better life for all.

Retardants to Progress. In recent years, Socialists in theory and practice have conducted a running attack upon American business and businessmen. Their theme is that "government could do it better" than free men operating in a free economy. They found converts in recent federal administrations. With skill and cunning they used the government's powerful propaganda machinery and its rich treasury to build up a substantial following among the general public.

The American people can be thankful that their Congress, refusing to be swept off its feet, rejected many of the Socialist proposals which were advanced. Steps were taken, nevertheless, that already have hampered and could interfere seriously with the

business development that is essential for continued progress.

Tax laws have been written, for example, which retard business development and destroy incentive. The misnamed "excess profits tax" discourages industrial growth and the introduction of new products. It is due to expire June 30, 1953, and it is to be hoped it will. If it had not been a temporary expedient, we would already be experiencing its dulling effects. If it is continued, we shall certainly feel them.

Steeply progressive taxes on personal incomes present another problem. Since the war they have been raised to confiscatory levels which dry up the sources of capital for new business. These high rates also stand in the way of recruiting young people capable of assuming top business leadership in the future.

Business management must compete with government, education, the armed forces, and the arts and professions for its new blood. These other careers offer intangible attractions such as personal prestige, public notice and power, more leisure and independence, and humane or scientific accomplishment. Business management is largely anonymous—a team effort with few featured performers—and its most important reward for work and worry is financial.

While crushing taxation in the upper middle brackets has little effect upon the rates which those at lower levels must pay, it has riddled the financial incentive which is all business can offer to its future executives. As taxes eat away at incentive, so more of our able young people will seek other fields, and fewer of those who are with us will be urged on to those extra efforts that are the difference between success and mediocrity. And business will be that much less able to fulfill its responsibilities to the nation.

There is another field for concern. While there must be rules for the conduct of business, just as in any other human activity, the laws as administered during recent administrations seem complex and often contradictory. A company which engages in aggressive competition, as directed by one statute, finds itself in trouble under another precisely because of its competitive vigor. Management spends both time and money better devoted to other ends in litigation and effort attempting to discover which business practices are permitted and which are not.

Our expanding economy also has encountered in government the curious theory that anything in business which is big is necessarily bad. Function should govern size. We use a spoon to lift sugar into our coffee, but if we want to move a coal pile, we look for a steam shovel. It is interesting to note that so does the government.

The critics of our business system have enlisted public support by cultivating the notion that government can and should guarantee security for everyone. We must always remember that a government produces nothing. It is only when wealth exists that it is possible to consider its redistribution. The idea of security as an obligation of the state can exist only in a country that has through generations of adherence to the opposite point of view, produced a great abundance of goods and services.

What Businessmen Can Do. Businessmen have an important role to play if they are to preserve and improve this system which has brought abundance to our people. They must, first of all, be conscious of their own responsibilities. The search for new and better products, for greater economy and efficiency in manufacturing, for wider areas of distribution, must be diligent. Progress halts when we are content with what we have.

It is also essential for business to observe its own fundamental rules. In a free economy, the rewards of invention and efficiency must be shared among owners, workers, and buyers. Short-sightedness or greed, as reflected by the insistence of any of these groups to profit at the expense of, rather than along with, others, can be disastrous. Far more beneficial is cooperation and mutual understanding.

Businessmen are busy, as the name implies. But too often in the past they have been so wrapped up in their own problems, so intent upon business affairs, as to give the impression that they lack interest in the general welfare. Their critics have exploited the tendency of business groups to take a negative approach toward questions of widespread public interest. Surely the ingenuity which conceived mass production and accomplished atomic fission is capable of offering responsible alternatives to unsound schemes.

It is equally important for business to emerge from its shell of reticence. Public misunderstanding of business methods and motives, of how business operates and what it has accomplished for the people, has been assiduously cultivated by Socialists and their political allies. If we give the people the facts, they can be trusted to make the right decisions.

We have recently received assurance of a changed attitude on the part of our administration in Washington. President Eisenhower pointed to the basic fabric of our economy in his State of the Union message when he said:

"We are concerned with the encouragement of competitive enterprise and individual initiative precisely because we know them to be our nation's abiding sources of strength."

In this country we have an economic system that has produced abundance for all of our citizens. We realize its imperfections and we have the will to improve it. But improvement does not mean that we must abandon that which is useful. It means simply that we must go on without turning our backs upon the fundamentals that have been proven sound.

The problem is not just one of political change. It is something that goes far deeper. It is a question of reaffirming the high moral standards to which we have held so strongly for so many years. It is a question of re-examining our faith in our republic, and in the principles on which it is based.

(Reprints of this and other articles in this series are available. Write to the Editors.)

President Hallett

1st Vice-President Smith

2nd Vice-President Winget

Cotton Textile Industry Progressive; Future Bright

Staff Report

THE TEXTILE industry is accomplishing more than ever before through improved technology, research, ingenuity, inventiveness, and modernized management, retiring president W. A. L. Sibley reported to members of the American Cotton Manufacturers Institute at the fourth annual convention, held at the Palm Beach (Fla.) Biltmore Hotel on March 26-29.

Nearly a thousand mill men, suppliers, and their wives attended the three-day meeting, planned around addresses by prominent business and government leaders, with many committee meetings held after the open sessions to study industry problems.

H. K. Hallett of Kendall Mills was elected president of ACMI, succeeding Mr. Sibley. First and second vice-presidents elected were J. Craig Smith of Avondale Mills and A. K. Winget of American & Efird Mills, Mt. Holly, N. C.

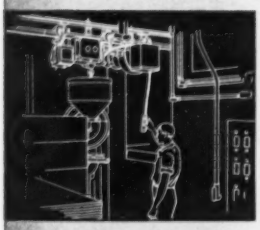
Abstracts of addresses and resolutions adopted during the convention follow:

W. A. L. Sibley, ACMI: "The nation first . . . " Some critics of business men like to say a manufacturer usually thinks of himself or his business first and his nation second. The national interest comes first; especially is this true in the case of an industry like textiles. The textile industry's welfare and the best interests of the national economy are intimately interrelated—one properly goes with the other; in the final analysis the two are the same.

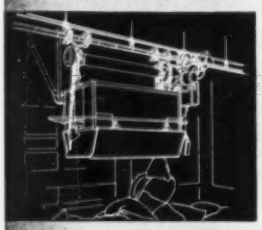
Competitive effort to produce better products for more people, and not subservience to the dictates of some supreme planning agency, has been the textile industry's driving force and the source of its progress through the years.

Progress Cited. Through improved technology, research, ingenuity, inventiveness, and modernized management we are accomplishing more than ever before. Our employees, while expending less physical energy at their tasks, earn better pay and with a shorter work week. Today there is romance in textiles as never before . . . . no other industry holds a greater future for many young men of our nation than does textiles.

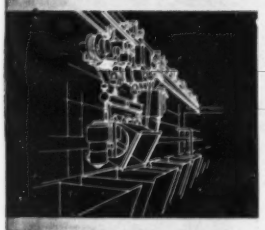
On Foreign Trade. Despite the fact that more than a score of foreign countries virtually debar the importing of American-made textiles, the U. S. emerged in 1952 as the world's leading exporter of cotton piece goods. The basic solution of the world-wide textile problem is in expanded consumption of our products, and (ACMI) presented a blueprint at the International Cotton Textile Conference for a world-wide program to increase consumption of cotton manufactured goods . . . . which gives promise eventually of easing the acutely distorted situation of international trade in textiles.



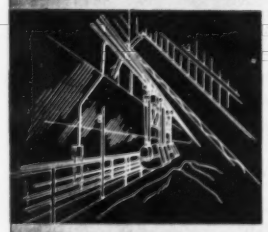
Dispatch to multiple stations



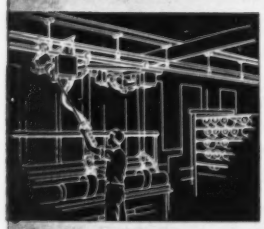
Delivery to fixed stations



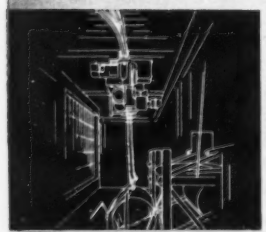
Delivery to multiple stations



Delivery to movable stations

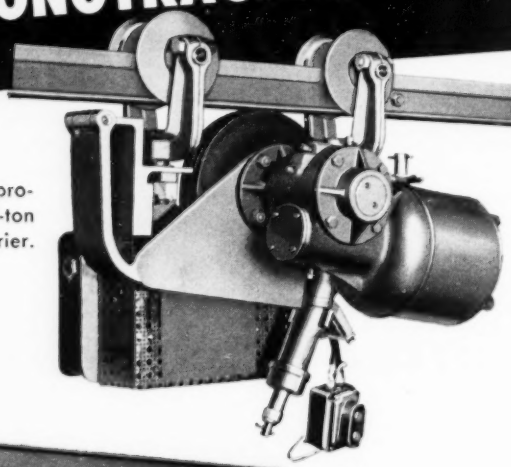


Selective dispatch between multiple stations

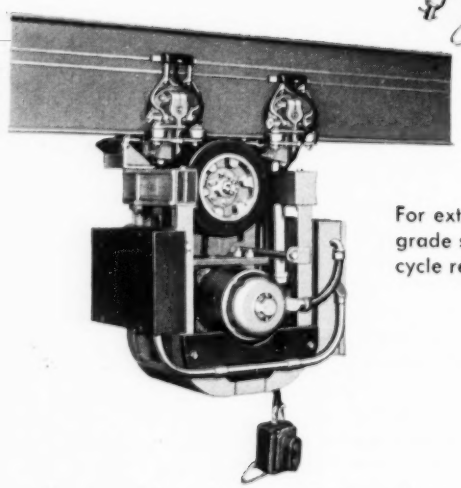


Load and delivery to multiple stations

2 New AMERICAN MONORAIL MONOTRACTORS



For low cost propulsion of a 1-ton hoist or carrier.



For extremely heavy-grade speed or duty-cycle requirements.

To propel heavy loads or automatic carriers on overhead monorail systems, here are two new American MonoRail MonoTractors. Through the application of simple electrical and mechanical devices, American MonoTractor Units perform a wide variety of automatic handling operations.

While unique in many features, such systems are built mainly from standard units. MonoTractors can be applied to carriers operating on any smooth bottom track. An American MonoRail Engineer is available for consultation in every important industrial area.

SEND FOR BULLETIN AD-1

THE AMERICAN MONORAIL COMPANY

13106 ATHENS AVENUE — CLEVELAND 7, OHIO

Multi-Lateral Trade. A counter movement has been directed against the remaining tariff protection of the American industry. Development of the slogan, "Trade —Not Aid," is popular because everyone is in agreement with it, but the danger is in the narrow interpretation of the slogan. As it is now being used, one would think that only the U. S. can provide the expanded trade and should do so by allowing all countries and all products free entry into its markets without regard for the interest of American industry or agriculture.

While the rest of the world has been tightening its trade restrictions, America has been opening its gates; and while our tariffs have been reduced, the total volume of imports has increased . . . . now four times greater than they were prior to World War II and twice as great as in 1947.

The real solution of the balance of payments problem depends in relatively minor degree on further elimination of barriers here; in much greater measure it depends on the action of other countries. The strangling effects of restrictions imposed by other countries, both on exports and imports, must be removed. Maximum trade is possible only when we have multilateral trade.

D. W. Brooks, general manager, Cotton Producers Association. Cotton acreage this year may be increased 5 to 10 per cent . . . could lead to a 15-16 million bale crop, creating a burdensome surplus. Seems desirable that cotton farmers continue to produce at rate of 13-15 million bales per year; if reduce production to point where only producing a sufficient amount of cotton for domestic mills, it would be a tremendous handicap to mills since they would not have the wide selection of grades and staple.

Estimate that cotton consumption this year by American mills will be about 9½ million bales and exports at 4 million . . . . carryover on August 1 could reach 4 million bales.

In order to defeat communism in the undeveloped areas of the world, it is necessary that the underfed and poorly clothed natives be taught to produce more food, more fiber by American specialists. Once this task is completed, American industry should step in and teach them to produce manufactured goods efficiently.

ACMI Officers

President: H. K. Hallett, Kendall Mills, Charlotte, N. C.
1st Vice-Pres.: J. Craig Smith, Avondale Mills of Alabama, Sylacauga, Ala.
2nd Vice-Pres.: Arthur K. Winget, American & Efird Mills, Inc., Mt. Holly, N. C.
Exec. Vice-Pres.: Robert C. Jackson, Washington, D. C.
Sec.-Treas.: F. Sadler Love, Charlotte, N. C.
Newly elected directors: William F. Staples, Merrimack Mfg. Co., Lowell, Mass.; William C. Cannon, Cannon Mills, Kannapolis, N. C.; Julian Robertson, Erlanger Mills, Lexington, N. C.; Clifford B. Hayes, Pacific Mills, Lyman, S. C.; Raymond G. Emery, Dunean Mills Division, J. P. Stevens & Co., Greenville, S. C.; Earle R. Stall, Florence Mills, Greenville, S. C.; J. M. Cheatham, Dundee Mills, Griffin, Ga.; D. H. Morris, III, Geneva (Ala.) Cotton Mills.

Charles R. Sligh, Jr., president, National Association of Manufacturers. Too many of our decisions are based on the fear of another depression or a third World War. Of nine nationally-known economists, seven of them agreed that the end of the year would bring a definite decline in general business activity; at the same time they admitted that our overall economy is now prospering.

Because of this attitude on the part of so many, business men have been on the defensive . . . . guilty of seeking security rather than planning for progress. Each individual business firm cannot be assured security in a free, competitive economy. Such assurance would certainly spell the end of economic progress.

This is not the time for business men to concentrate on security. They must continue to be the chief innovators and risk-takers of society. Business men must not seek safety; to do so is to forfeit the right of leadership.

Ed Lipscomb, sales promotion director, National Cotton Council. Regardless of government programs, drought, boll weevil, etc., the welfare of the cotton industry rests ultimately in the hands of a single group—the individual customers who do, or do not, buy and use its products. The job of selling cotton is essentially the same as that of selling anything else.

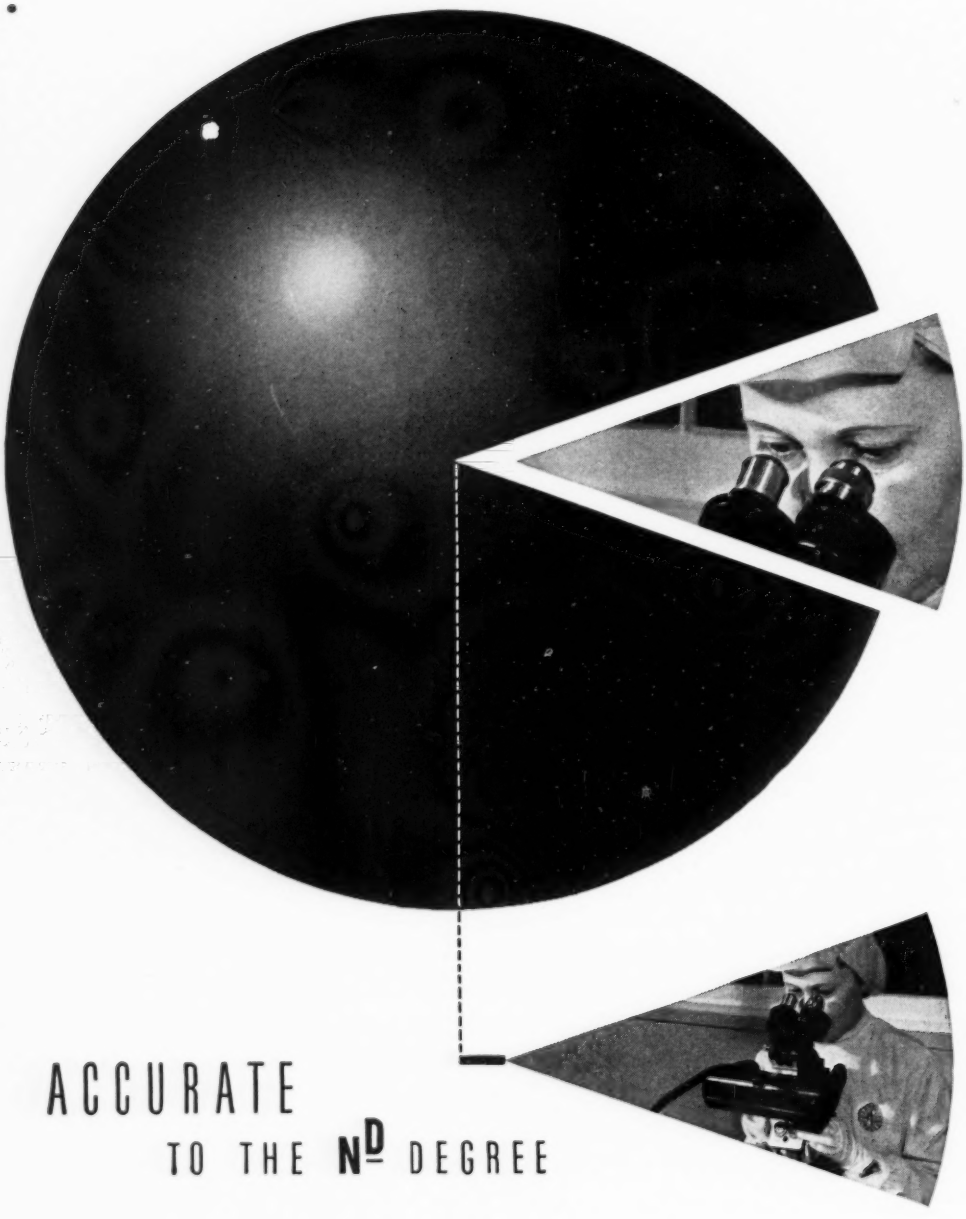
If cotton is to be sold it must meet its competition on three fronts: (1) the quality of the products it offers for sale (2) the price at which it offers them, and (3) the sales pressure it puts behind them.

Effectiveness of the industry-wide cotton program is shown by the fact that in the worst year since the program was launched, U. S. consumption of cotton products was better than in the best preceding year.

Cotton's future will be brighter than its past. Our challenge is to develop the sales programs which will enable us to convert our tremendous opportunities into comparable achievements.

Robert C. Jackson, executive vice-president, American Cotton Manufacturers Institute. A responsibility of the textile industry is not to take undue advantage of the new voice and influence which the federal administration has given business, but rather to contribute through this new voice and influence the experience, the organizing genius, and the enthusiasm for the preservation of American principles of freedom and democracy which business men can contribute.

There is the greater responsibility to the total American economy and the people as a whole, a responsibility not only to plow back earnings for improved physical plants and machinery, but al-



Typical of the careful inspection which New Departure bearing parts must undergo, a raceway is checked by powerful microscope which could reveal the most minute flaw.

ACCURATE
TO THE ND DEGREE

Today's textile machines, performing many intricate operations, require accurate, low friction support for their moving parts. Wherever ball bearings are best for this job, the *best ball bearings* are New Departures.

Accuracy is a "must" at New Departure where the diameter and roundness of the balls for many bearings are held within the limits of a few millionths of an inch. To preserve this accuracy, and increase bearing life, New Departure not only originated and developed the sealed-for-life bearing, but also developed an ingenious injection-relubrication method for textile bearings which permits revitalization of bearing grease.

If your application calls for bearings of pre-determined accuracy and life expectancy, install New Departures. Keep your eye on the BALL to be sure of your BEARINGS!

NOTHING ROLLS LIKE A BALL

NEW DEPARTURE
BALL BEARINGS

NEW DEPARTURE • DIVISION OF GENERAL MOTORS • BRISTOL, CONNECTICUT
Also Makers of the Famous New Departure Coaster Brake

so to plow back a greater investment in human values. Failure on our part to recognize these responsibilities might bring consequences a very few years from now which could set off a far greater departure from the fundamentals of our free enterprise system than we have ever known before.

RESOLUTIONS

Cleaning of Cotton. The mechanical harvesting of cotton produces cotton that is roughly gathered, trashy, and often grassy. Additional cleaning equipment has been added by most ginners in an effort to clean the cotton.

The American cotton manufacturers need clean, well-handled cotton, with fiber uninjured. Great effort has been expended by private seed breeders and by the Department of Agriculture to improve fiber qualities. This great effort and expense should not be nullified by improper handling and ginning.

Based on private mill tests, as well as the 17-mill test sponsored by the American Cotton Manufacturers Institute and the National Cotton Council, it is our considered opinion that the over-cleaning, over-drying, over-heating, and over-machining of cotton definitely injures the cotton fiber and places it at a disadvantage.

We feel that after the saw has separated the lint from the seed in the conventional process that it has completed its primary function. We feel that any additional ginning of lint cotton with saws constitutes reginning, and reginned cotton is not deliverable on contracts of any of the spot or futures exchanges in America; neither is it deliverable under our mill rules.

It is therefore resolved that the American Cotton Manufacturers Institute recommends that cleaning methods be employed in the ginning of cotton that do not injure the fiber.

Tar Spots. The cotton textile manufacturers have experienced great losses by reason of tar spots in their goods. These tar spots have originated from asphalt-coated ties, asphalt-coated picking sacks, asphalt roads, asphalt-painted box cars, and many other sources.

Elimination of such contaminations must come through educational processes. These contaminations constitute an economic loss to the manufacturer, which must ultimately reflect back against cotton's economic position in relation to competitive fibers.

Roger Milliken Heads Public Relations Committee

Roger Milliken of Deering, Milliken & Co., Inc., was elected chairman of the Textile Committee on Public Relations. Having held the post of treasurer of the committee for the past five years, Mr. Milliken succeeds Charles A. Cannon of Cannon Mills Company, chairman for the past two years. A. B. Edge of Callaway Mills was elected committee treasurer.

New members elected to the committee were: John P. Stevens, Jr. of J. P. Stevens Co.; Brackett Parsons of Pepperell Mfg. Co.; J. M. Cheatham of Dundee Mills; and Albert S. Allen of Pequot Mills.

The ACMI urges the National Cotton Council to appoint a committee composed of a representative from each of the six cotton interests, to check into all the ramifications of this problem, and to take action to improve this situation as fast as possible.

Packaging of Cotton. Cotton has suffered severe damage because of contamination due to faulty packaging. The only complete and permanent remedy for this situation is the perfection of a covering for each bale of cotton. The Institute of Textile Technology has made excellent progress in developing such a bale covering.

The ACMI commends the steps thus far taken by the Institute of Textile Technology and, further, endorses the work already done by the Cotton Committee of the American Cotton Manufacturers Institute; and urges the Cotton Committee to continue its cooperation with the Institute of Textile Technology to the end that this problem be solved.

Cotton Crop Estimates. The early estimates on acreage and production by the United States Department of Agriculture vary greatly from later estimates which are based on more factual information. These government estimates have a very strong impact in the cotton trade, causing what later proves to be erroneous price fluctuations. Such erroneous price fluctuations are exceedingly detrimental, not only to the price structure on raw cotton, but also to cotton textile products.

For these reasons the ACMI respectfully requests the Secretary of Agriculture to discontinue issuing estimates on acreage and production which are issued too early to be based on factual information, letting early reports cover only the conditions of the crop generally throughout the Belt.

Decline in Cotton Standards. The United States Department of Agriculture has promulgated new standards for American upland cotton to become effective August 15, 1953. These new standards constitute another lowering of standards of quality.

This persistent and continual lowering of standards since 1946 has given us the positive impression that important policy decisions have been made without our consultation, and that we have been summoned not so much to participate in making actual decisions on standards as to go through the formality of giving approval to matters already decided upon.

Events taking place in the trade substantiate the fact that among the cotton textile mills of America there is growing dissatisfaction with the standards. The trend this year, more than ever before, has been away from buying cotton on description.

If a mill is unable to obtain the quality it knows it must have because the standards are inadequate to facilitate its procurement, that mill has no choice but to employ other methods of purchasing its needs; or to change its basic raw fiber material from cotton to another substance.

This situation has greatly handicapped the mills in buying the specific qualities of cotton required for their products, and may eventually force many domestic mills to cease the consumption of cotton and turn to substitutes.

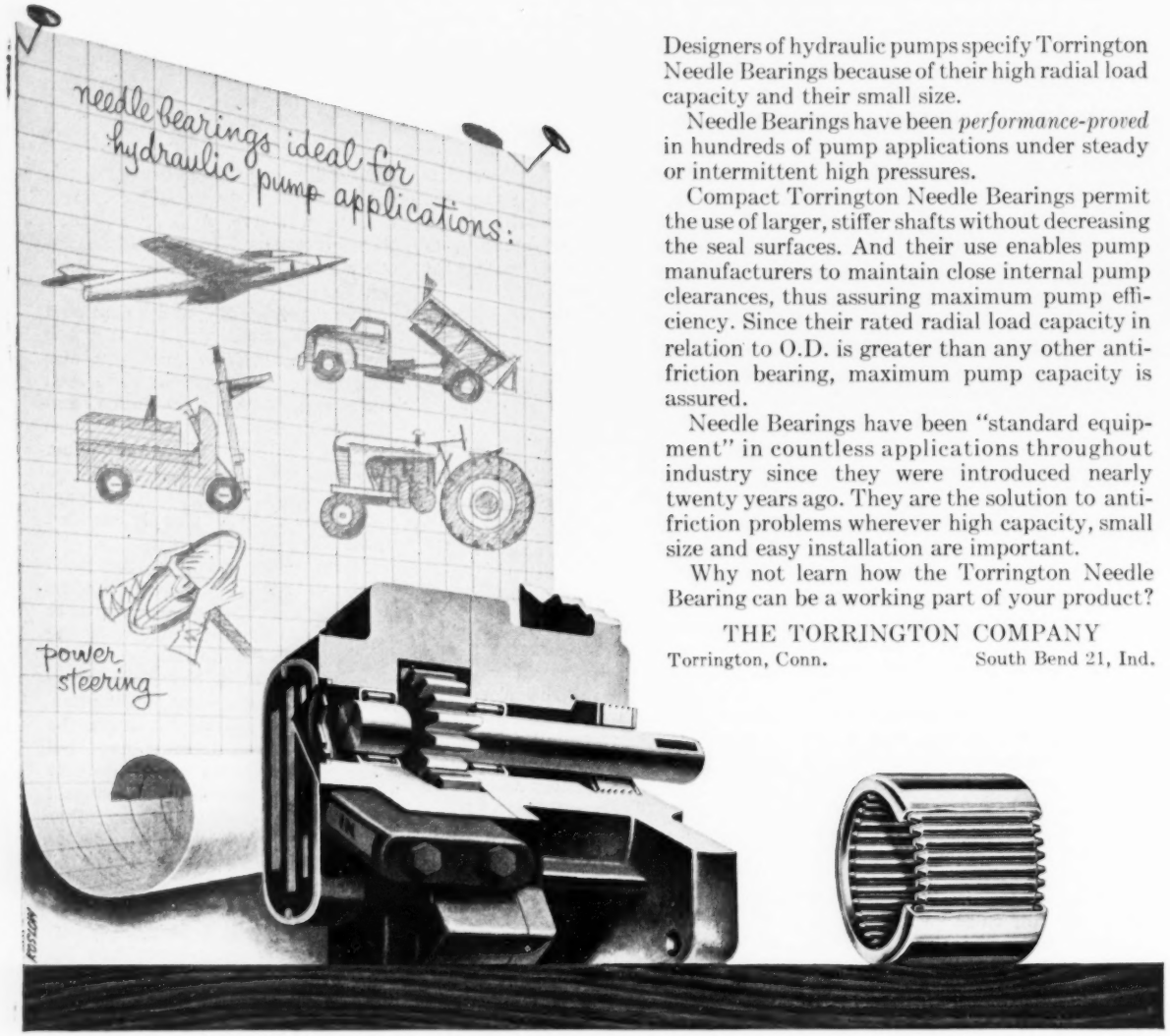
Although the situation has been brought forcibly to the attention of governmental authorities, the Department of Agriculture has ignored the opinions and recommendations of representatives of the ACMI.

The ACMI vigorously protests to the Secretary of Agriculture this action in lowering the standards of American cotton over the determined protests of American manufacturers.

Another resolution endorsed the principle of cotton price supports that are adequate and fair from the farmers standpoint, but opposed the use of export subsidies on cotton.

Need a high capacity bearing with small size?

here's how hydraulic pump manufacturers get it with **NEEDLE BEARINGS**



Designers of hydraulic pumps specify Torrington Needle Bearings because of their high radial load capacity and their small size.

Needle Bearings have been *performance-proved* in hundreds of pump applications under steady or intermittent high pressures.

Compact Torrington Needle Bearings permit the use of larger, stiffer shafts without decreasing the seal surfaces. And their use enables pump manufacturers to maintain close internal pump clearances, thus assuring maximum pump efficiency. Since their rated radial load capacity in relation to O.D. is greater than any other antifriction bearing, maximum pump capacity is assured.

Needle Bearings have been "standard equipment" in countless applications throughout industry since they were introduced nearly twenty years ago. They are the solution to antifriction problems wherever high capacity, small size and easy installation are important.

Why not learn how the Torrington Needle Bearing can be a working part of your product?

THE TORRINGTON COMPANY

Torrington, Conn. South Bend 21, Ind.

TORRINGTON *NEEDLE* **BEARINGS**

Needle • Spherical Roller • Tapered Roller • Straight Roller • Ball • Needle Rollers

Trade-marks of some of the leading hydraulic pump and motor manufacturers whose products enjoy the benefits of Needle Bearings.

EATON · Hercules · GEROTOR · HYDRECO HYDRAULIC CONTROL EQUIPMENT · Kingston · JOHN ZINK COMPANY TULSA, OKLA. · WEBSTER ELECTRIC · GW · MARLEN · engineering Pesco PRODUCTS DIVISION production

ROLLERS SHOULD BE POLISHED on a lathe and finished with powdered pumice or similar polishing material to produce a highly burnished surface. Here operative has polished chromium plated roll on lathe and is applying corrosion resistant lubricant on roll to prevent damage while in storage.

Engravings

and their effect on TEXTILE PRINTING

By RICHARD CARTER

EXCLUSIVE

MANY textile printing faults may be produced by using the wrong type of engraving. This difficulty is not always the engraver's responsibility in that the wrong instructions may have been issued by the printer.

The colorist and foreman printer should confer with the person instructing the engraving operation to ascertain that the instructions are correct. For example, the printer may be able to point out where two outlines will be required instead of one; also where engravings should be "saved." Many other details may require careful consideration.

The colorist will be able to indicate whether the design should be printed by the discharge printing method or as a blotch print. It may be necessary to point out whether the engraving should be deep or shallow for the production of special color effects. The necessity for consultation can hardly be overemphasized, because it is better to prevent an error than to correct an error. Also, it is well known that many printing faults would not arise at all if sufficient thought had been devoted to instructions for engraving.

Heavy Engravings. The engraved depressions form the receptacles for the print paste; therefore, the depth of the depressions has a far-reaching effect on the printing impressions produced on the cloth. This point should receive careful consideration beforehand so that the engraving is not made too deep or heavy for the type of cloth being printed.

A moderately wide range of

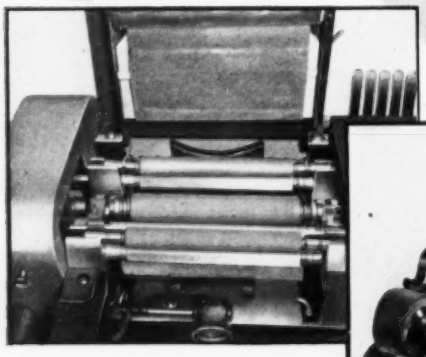
THE SACO-LOWELL *Synthetics* "TASK FORCE"

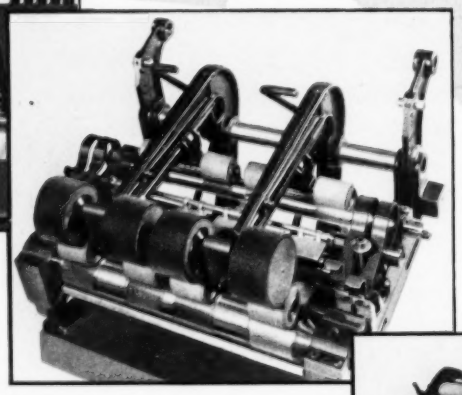
3 OVER 4 DRAWING FRAME

THE F-5 ROVING FRAME

THE Z-5 SPINNING FRAME

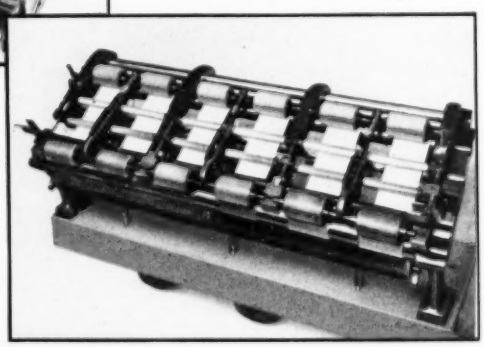
FOR PRODUCING HIGHER QUALITY LONG STAPLE SYNTHETIC YARN AT LOWER COST





DURING 1953 MORE THAN 162 MILLION POUNDS OF LONG STAPLE SYNTHETIC YARN IS SCHEDULED FOR PRODUCTION AND DISTRIBUTION

This Saco-Lowell Task Force for synthetics, 3 over 4 Drawing, F-5 Roving and Z-5 Spinning is flexible in adjustment, rugged in construction, easily understood and adaptable as change-overs to existing equipment.



This Saco-Lowell "Task Force" is a modern, specialized and flexible straight line unit which has demonstrated unusual operating efficiency in both laboratory and mill. Roll settings, coverings and pressures are easily adjusted to process simple and complex blends of natural and synthetic fibres in a wide range of staple lengths and deniers.

Any mill working with synthetics will find it worthwhile and interesting to discuss the "Task Force" with Saco-Lowell engineers.

SACO-LOWELL

60 BATTERYMARCH STREET, BOSTON 10, MASS.

Shops at BIDDEFORD *and* SACO, MAINE; *and* SANFORD, N. C.

SALES OFFICES: CHARLOTTE • GREENSBORO • GREENVILLE • ATLANTA

engravings may be used within the range of cloths usually processed by textile printers. For example, on heavy furnishing or upholstery fabrics, an average of 25 lines per inch with a depth of .013″ may be suitable; whereas for light cloths and fine engravings, as many as 48 lines per inch and a depth of from .003″ to .005″ may be used.

If a set of rollers is to be used on more than one type of fabric—for example, on a light-weight mercerized handkerchief cloth and also on a linen cambric—care must be exercised to be sure that the fairly heavy engraving required to secure adequate penetration on the linen is not too heavy for the light cotton material. Similar precautions apply to very light and medium weight dress goods, cotton dress goods, and spun rayon dress goods, and to designs which may be printed as dress goods patterns on light materials or casement styles on heavier fabrics.

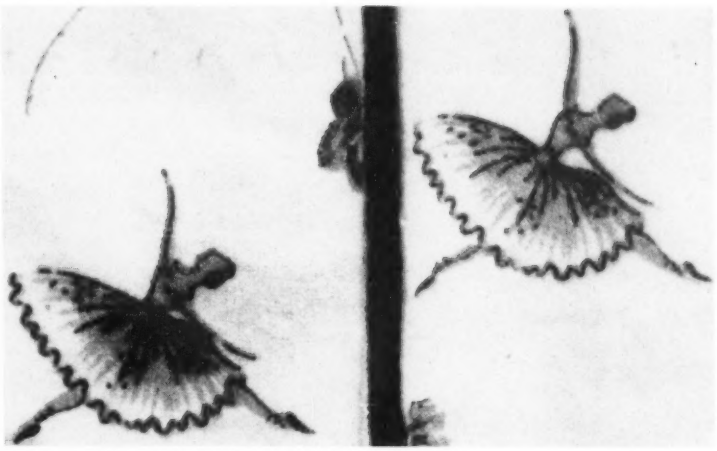
The most important consideration in this instance is that such heavy engravings supply too much color to the lighter fabrics. This condition will bring forth: (a) flushed or fuzzy design at the edges; (b) greatly increased consumption of print paste—up to 50% more than normal on light fabrics; (c) excessive soiling of the printing blanket with all the faults which are likely to arise in such circumstances; (d) excessive soiling of the back greys, thereby permitting their use only once because the print paste is likely to penetrate to the other face of the fabric and so prevent further use of the grey before washing; (e) increased difficulty in washing-off the print goods in view of the excessive amount of print paste applied.

Heavy Outline Engraving. Heavy outline engraving is a common fault and is often due to poor instructions to engravers. For example, in many print designs it is not possible to "save" the blotch portions of the pattern so that the outline may be fitted into the design.

This means that the outline must be first in the sequence of printing so that it will appear clear and sharp when the blotch portions of the design are subsequently allowed to "fall-on." It is further obvious that this may lead to "flushing" or "springing" of the outline where the blotch portion is too heavily engraved and perhaps where a fairly heavy blotch is being printed.

A further aspect of this problem is that such a heavy outline is usually printed in a dark color, such as black, navy, or brown, and will tend to work-over into the succeeding blotch color which is generally light in tone.

Similar difficulties are likely on outlines which bind large spots, diamonds, etc., closely, and where consequently there is some likelihood of the outline flushing at the point of incidence with the other print color. Also worthy of note is the fact that all outline rollers for dark colors should be chromium plated to give a hard burnished surface which is not easily scratched or damaged by grit, sand, etc., from the print pastes or fabric. Another valuable point in favor of chromium plating is that where outlines are printed subsequent to the application of blotch portions of the pattern the chromium plated rollers do not "scum" so readily as a copper roller. And there is, therefore, less risk of damage to the blotch print by "lifting" of the print paste "film" or "scum" from the dark outline roller.



ONE PATTERN on two different engravings indicates that one engraving was etched too deeply (sample at left); whereas sample at right was made from satisfactory engraving. Sometimes the consistency of the printing paste or an improperly set doctor blade may cause similar discrepancies.

Where the foregoing trouble is encountered from a dark outline roller on a plain copper surface, the following remedies are suggested:

(1) The roller should be taken off the machine, polished on a lathe, and finished with powdered pumice or powdered bath-brick to give a highly burnished surface.

(2) Ammonium polysulphide may be applied to the roller to give a thin film of copper sulphide which should in turn be polished thoroughly.

(3) Solvents and lubricants should be added to the print paste so that the tendency to "scum" on the roller surface is reduced as much as possible.

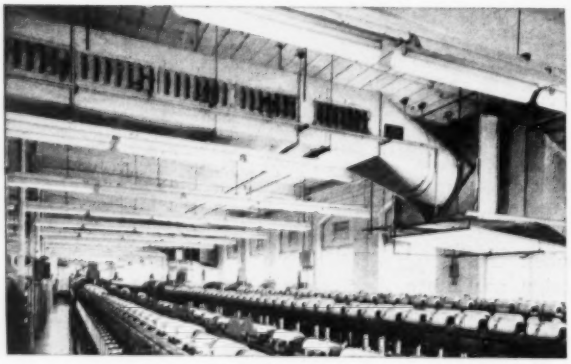
White Discharge Prints. White discharge prints are usually executed in reasonably fine engravings. Heavily engraved designs are difficult to execute in this particular style.

The main arguments against extensive white discharges on dyed grounds are: (a) similar effects could probably be obtained more effectively and with less expense by "blotching" the design. This also means that the design can be executed in fast vat colors, whereas the fastness properties are limited on the discharge style; (b) a heavy white discharge is likely to "lift" on the drying cylinders of the printing machine with conse-

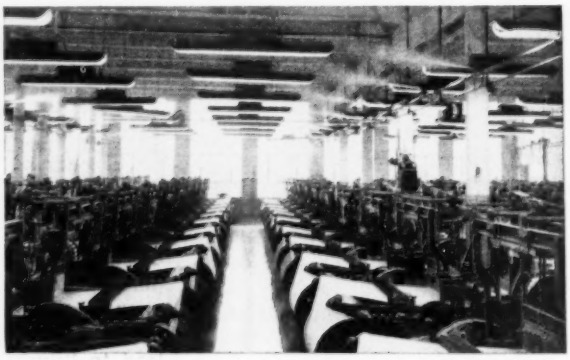
Parks-Cramer

CERTIFIED CLIMATE

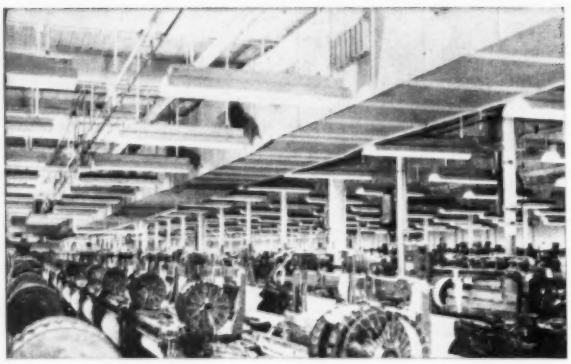
YOU know the value of closely controlled atmospheric conditions in the textile mill. OUR object is to design the best possible air conditioning apparatus and to recommend the system most suited to your requirements.



Automatic Airchanger—unit or central type.



Gradumatic Humidification.



Air Washer System—central station or ceiling type—straight or in combination with direct humidification or refrigeration.

Each system flexible and of dependable capacity.

All with Gradual Acting Psychrostat Regulation.

Engineering, manufacturing, installing by Parks-Cramer.
Complete new installations. Modernizing of existing systems.
Centralized responsibility.
Textile mill humidification and air conditioning since 1906.

Parks-Cramer Company

FITCHBURG, MASS. CHARLOTTE, N. C.

quent risk to the unprinted portions of the fabric; (c) such heavy white discharge prints are also difficult to wash-off thoroughly without some risk of bleeding of the dyed ground into the white discharge print; (d) insufficient washing leads to retained thickening which is likely to give an inferior white effect and a "hard" handle to the finished goods.

Light Engraving. If the engraving on a roller is not sufficiently deep for a specific purpose, an inferior printing impression will be obtained. Such engravings are sometimes encountered where fairly heavy fabrics are being printed or where there is some difficulty in producing a good printing impression on a specific type of cloth. It is worthwhile to note again that engraving instructions should also take into consideration the type and condition of the fabric on which the print is to be produced.

Spun rayon fabrics for dress goods provide some examples where very light engraving can produce inferior results. For instance, in the production of classical designs using brown, bottle green, wine, navy, and black on grounds dyed with pastel shades in fast colors, it is essential to produce a well covered and "solid" printing impression. This can only be done by using moderately deep engravings which may range from .005 to .010 of an inch, the extra depth being obtained by allowing a longer time of immersion in the acid etching bath during engraving.

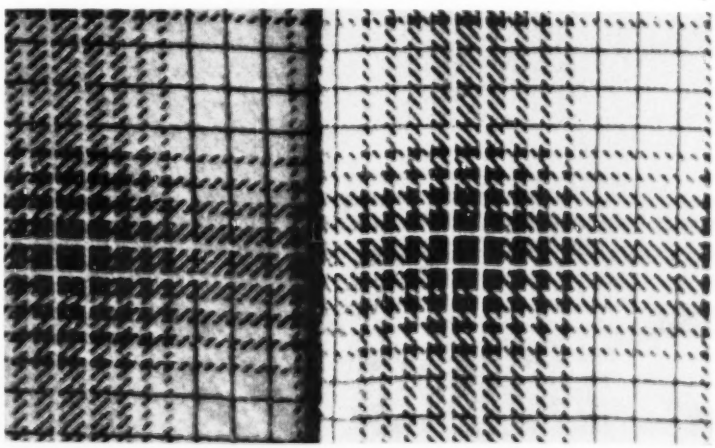
Designs of this type are also sometimes used along with the white discharge motif on dischargeable dyed grounds. Such designs usually take the form of a small object or motif repeated many times over the surface of the fabric, and this in turn lends itself to engraving by the technique of "milling."

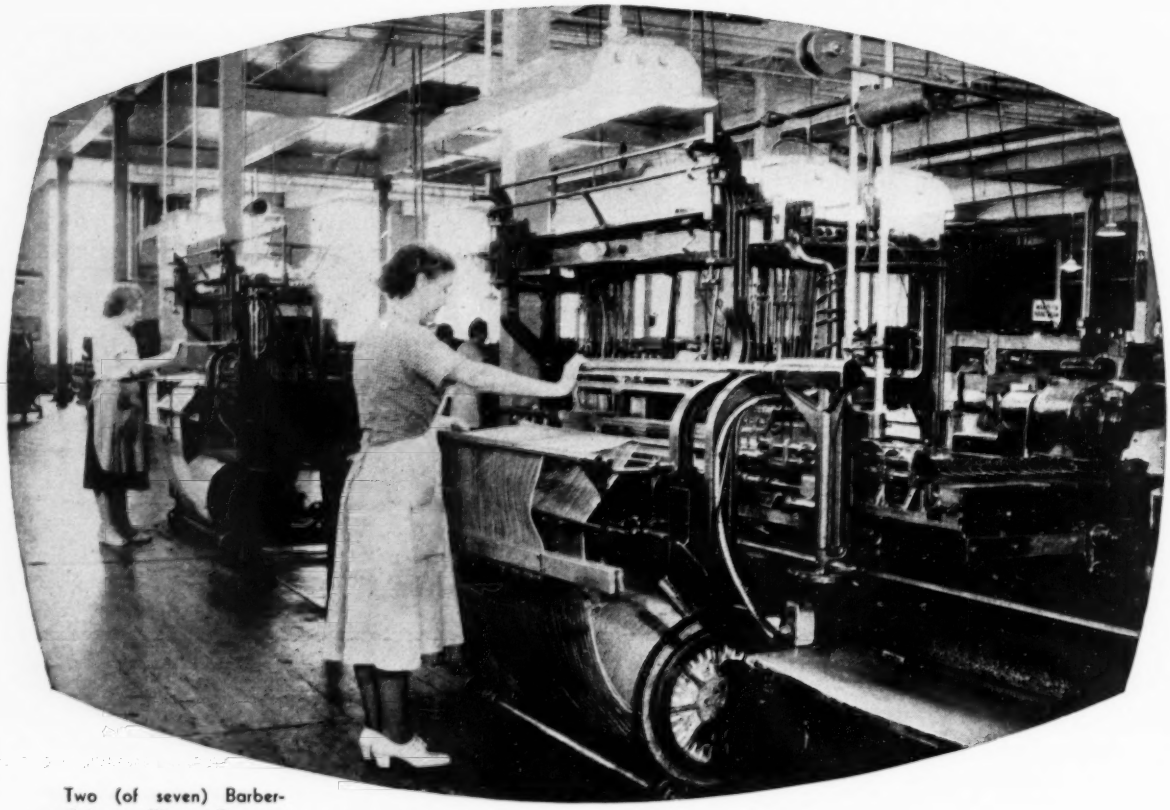
Where engravings are milled, the design is impressed upon the copper roller surface by means of a hardened steel die or mill on which the design is raised in relief. The die is brought into contact with the roller surface by hand pressure which is continued until the engraving craftsman has ascertained that a sufficiently deep impression has been made on the roller. This technique is repeated over the entire surface of the roller until the roller is completely covered with engraved repetitions of the original motif.

This method of engraving may produce patchiness or heavy and light effects which are reproduced in lines or stripes (corresponding to the width of the die or mill) repeated over the roller surface. The lightly milled portion will show up badly, and the only remedy is to re-engrave the whole roller, because it is difficult to correct such a fault by hand-milling only. Where difficulty of this type is encountered, more level results would probably be obtained by pantographing and etching the design in the usual

SOLVENTS and lubricants should be added to the print paste so that the tendency to "scum" on the roller surface is reduced as much as possible.

TWO ENGRAVINGS from same pattern. Sample at left is red; right sample is green. Note difference in weight of lines. Too much printing paste was transferred to sample at left.





Two (of seven) Barber-Colman Warp Drawing Machines in the Dan River Mills, Schoolfield Division, Danville, Virginia. These machines draw up to 10 harness and 4 banks of drop wires. Operatives are two women and one helper.

BARBER-COLMAN WARP DRAWING MACHINES Reduce Drawing-in Costs

In a mill where patterns are changed frequently, the speed, accuracy, and versatility of Barber-Colman machines are the basis of a good investment. These machines provide rapid warp renewal for straight or complicated draws with equal efficiency, draw plain or multi-colored warps, perform single or double draws on one or two sheets, and work from either a leased or flat sheet. The reed, harness, and drop wires are all drawn simultaneously. The machines shown above are delivering around 9 warps a day of cotton stripe material that runs 2884 ends, 67 sley, employs a straight draw, uses 6 harness, 4 banks of drop wires, and is drawn at 200 picks per minute.

AUTOMATIC SPOOLERS
SUPER-SPEED WARPERS
WARP TYING MACHINES
WARP DRAWING MACHINES

BARBER-COLMAN COMPANY
ROCKFORD, ILLINOIS • U.S.A.

Framingham, Mass., U.S.A. • Greenville, S.C., U.S.A. • Manchester, England • Munich, Germany

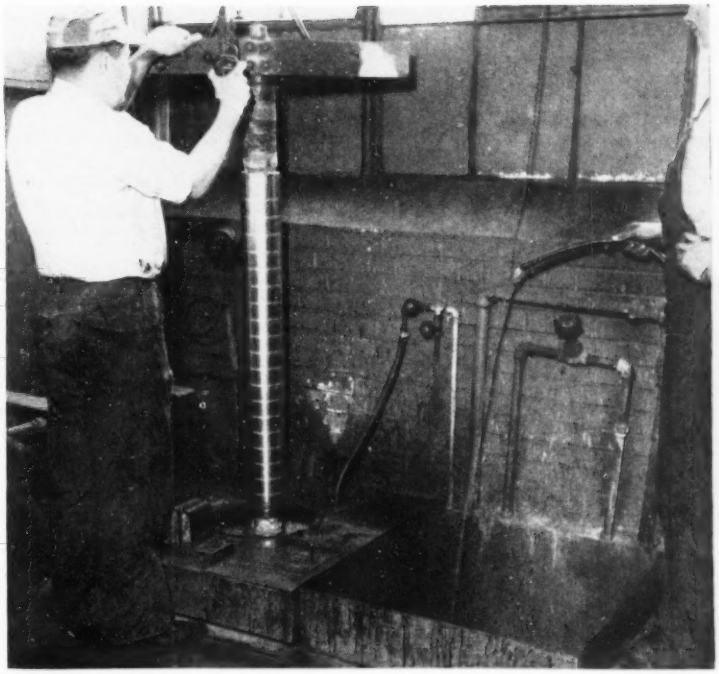
manner.

Wear on Engravings. Wear on engravings is one of the printer's constant preoccupations. Perhaps the best answer to this problem is that of chromium plating the rollers. The two main factors in wear of this type are: (a) the incidence of the doctor blade edge on the engraved portions of the roller, and (b) the angle of the engraving incisions.

In the first place, if the doctor blade is set at a very acute angle to the roller surface with heavy pressure on a hard steel blade, wear will be much greater than it would be if the angle of the blade were reduced and a lower pressure used. In this connection it should be pointed out that in many instances such factors can be considerably reduced without any risk of producing an inferior printing impression. Again, in many instances, a hard blade is used when a much softer edge would be sufficient. A spring blade is much more resilient under pressure and will ride over the ridges of the engraving incisions more easily with less wear. A spring blade often produces improved printing impressions, especially on blotch styles.

When engraving incisions are set at a wide angle, the doctor blade edge wear will be reduced considerably as compared to similar incisions set at an acute angle. The doctor blade edge is drawn across the ridges of the engraving incisions approximately at right angles when the incisions are at an acute angle. This means that the full pressure on almost the whole edge is borne by the engraving top ridges which are consequently more quickly worn.

This wear reduces the depth of the engraving incisions so that much less print paste is carried by the roller up to the cloth surface at each revolution. If the wear becomes very pronounced, the tops of the ridges become flattened, and instead of being flooded with print paste from the adjacent incisions, this flat top leaves a white mark on the cloth. The multiplication of these flat-topped ridges in an engraving of 30 lines per inch will leave the familiar "teeth-marks" in a blotch design.



CHROMIUM PLATED rollers present a hard burnished surface which is not easily scratched or damaged by grit, sand, or other foreign matter in the print paste or fabric. The roller shown here has just been removed from the chrome plating bath. In this instance the chrome plating equipment is located in the mill convenient to the printing department.

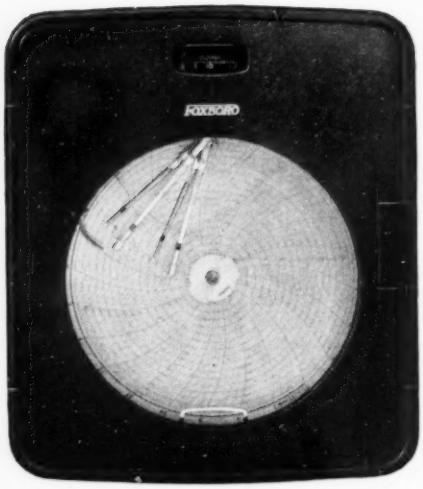
A somewhat similar fault is noted with what are known as "under-the-surface" engravings. This fault occurs when the tops or ridges of the engraving incisions are corroded by acid during the etching process in engraving. It is obvious that acid etching should be controlled so that the final result leaves the engraving "tops" exactly level with the rest of the roller surface. The ridges or "tops" provide a support for the doctor blade and are left sufficiently sharp so that they can be flooded with print paste, the total effect being to furnish a level mass of color to the fabric.

Not only does this fault lead to the so-called "teeth-marks" but to a further fault known as "doctor-dipping." This latter fault is due to the lack of support for the doctor blade edge which, under pressure, consequently dips into the engraving and removes some of the print paste held by the engraving incisions which have already been reduced in depth by over-etching as already noted. This in turn leads to more rapid wear, and the general condition of the roller becomes rapidly worse, especially in conjunction with such adverse factors as the wrong angle of engraving and excessive pressure on the doctor blade edge.

The incidence of such faults as the foregoing leads to consideration of the advantages of chromium plating.

Advantages of Chromium Plating. Briefly, the main advantages of chromium plating are: (a) much longer wear—up to 3 to 10 times that of ordinary copper rollers; (b) a marked reduction in ordinary printer's damages, such as streaks, cuts, scums, etc. The advantages of chromium plating engraved copper rollers far out-weigh any disadvantages which have been noted.

The foregoing advantages are particularly noticeable in long runs of printing, and for this reason, chrome-plating has been very generally adopted in U. S. textile printing practice. With long runs, high speed, and with vat printing colors, up to a quarter of a million yards have been printed



WET AND DRY BULB INSTRUMENTS

These Foxboro instruments give separate wet and dry bulb records on the same chart . . . in dry bulb ranges from 32°F. to 212°F. They are exceptionally accurate and stable. Bulbs can be placed up to 200 feet from the instrument. Available as recorders, or air operated (Model 40) and electric (Rotax) controllers, including multi-zone and time-humidity controllers.

DIRECT-READING DEW POINT INSTRUMENTS

Foxboro recently introduced the first simple, continuous dew point measuring instruments for industrial use. Their patented humidity sensitive element, the "Dewcel", requires no water box or moving air. Accuracy is unimpaired by dust or lint. Foxboro recording and controlling instruments, used with the "Dewcel", give direct readings from —50°F. to 142°F. dewpoint, at dry bulb temperatures up to 220°F. Readings easily converted to absolute or relative humidity. Foxboro instruments for dew point include liquid expansion type and electronic type recorders and controllers . . . with either pneumatic or electric control action. The Multi-Record Dynalog® for dew point provides up to 6 records on a single round chart.

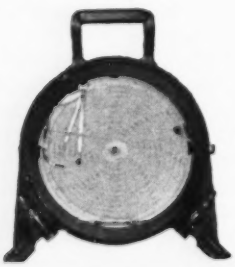
*Reg. U. S. Pat. Off.

better measurement and control of humidity

DIRECT-READING RELATIVE HUMIDITY INSTRUMENTS

Direct-reading relative humidity hygroscopic instruments are designed to operate in temperatures up to 140°F. They are available for recording (including the portable model shown here), and controlling (pneumatic M-40, or electric *Rotax*, operated). Sensitive, accurate, reliable.

Combination temperature and relative humidity recorders (0-100°F and 0-100° R.H.) are shipped from stock.



Ever since it introduced the first successful long-distance wet-and-dry bulb psychrometer, Foxboro has pioneered in the development of new and improved methods for the measurement and control of humidity. In its knowledge of textile process requirements, and its complete line of better-engineered instruments, there's more than likely the ideal solution to your own problem.

Why not write for complete information, or talk it over with a Foxboro Engineer, now? The Foxboro Company, 485 Neponset Ave., Foxboro, Mass., U. S. A.

FOXBORO REG. U. S. PAT. OFF. **HUMIDITY INSTRUMENTS**

FACTORIES IN THE UNITED STATES, CANADA AND ENGLAND

without the rollers requiring any attention.

A further point in favor of chromium plating is that the fault of over-etching, with the production of "under-the-surface" engravings, does not present the same difficulty as it would on an ordinary copper roller. The reason for this is that the over-etched "tops" being plated are more able to bear the pressure of the doctor blade and the constant wear involved. A further point here is that the chromium tends to deposit on the points of the cathode (the copper roller) nearest to the anodes. This means that the ridges are slightly more heavily coated with chromium than the bottoms of the incisions on the roller with increased protection at the points which require more resistance to wear.

Disadvantages of Chromium Plating. The mirror-like surface of the chromium plating does not hold the print paste as well as a plain copper surface. This seems to be a somewhat similar phenomenon to that of water running off a glass surface, and because of this the furnishing of the color or print paste is not so good in some instances. For example, on a hard-surfaced cloth like mercerized dress or casement fabrics or on light-weight mercerized handkerchief cloths there is a slight difficulty in obtaining a well covered print in a blotch design. This difficulty is increased if chromium plated rollers are used and if the print paste itself is not viscous enough to hold to the chrome plated surface.

The difficulty may be overcome to some degree if a more viscous print paste than usual is used. Here another problem may arise if good penetration of the print is also required. Another method of overcoming the difficulty is to use a hand-engraving tool to deepen the incisions of the part of the roller which is giving trouble. This leaves the chrome on the tops of the ridges of the engraving and prevents undue wear.

It has already been noted that the bottoms of the engraving incisions are more thinly coated with chromium; therefore, less resistance is offered to the use of the engraving tool where such deepening is required.

Stripping Plated Rollers. One of the difficulties encountered in using chrome-plated rollers is that of effecting a major repair. For example, it may be necessary to add an omitted portion of the engraving. Removal of the chromium is essential, otherwise it would be impossible either to repair the roller or put in a new bit of engraving because of the hardness of the chrome-plated surface.

Stripping is done by immersing the roller in a bath of 20% hydrochloric acid at 140 F to 150 F. If the job is rushed, 180 to 190 F may be employed. The same effect may be produced by immersing the roller in a concentrated hydrochloric acid bath at room temperature. The end-point of the reaction is easily observed by the fact that vigorous chemical action ceases when all the chromium has been dissolved. The stripped roller may then be prepared in the usual way by a hand engraver or by a shop foreman skilled in the use of the engraver's tools.

Another method of stripping which has been recorded is to heat the roller by steam and rotate it in a 10% solution of hydrochloric acid. The process should be carried out under careful supervision.

Excess Profits Tax Takes Heaviest Toll from Small Business—NAM Survey

The Excess Profits Tax takes its heaviest toll from small business, a survey by the National Association of Manufacturers indicates.

Of 2,639 companies reporting that they have been subject to the tax, which takes as much as 82 cents out of a dollar of earnings, 78.6 per cent were in the category of small companies employing 500 or fewer persons, the survey disclosed.

In the questionnaire which the NAM sent to member companies, businessmen were asked to describe their experiences under the excess profits tax. Some 1,500 companies responded to this part of the survey.

"The replies revealed a pattern of plans for expansion scrapped by lack of funds, due to the excess profits tax," the NAM said, "of present and future jobs killed, of blows to community prosperity, of waste and higher costs; of new products abandoned, of enforced and unsound borrowing, and of losses of benefits to employees."

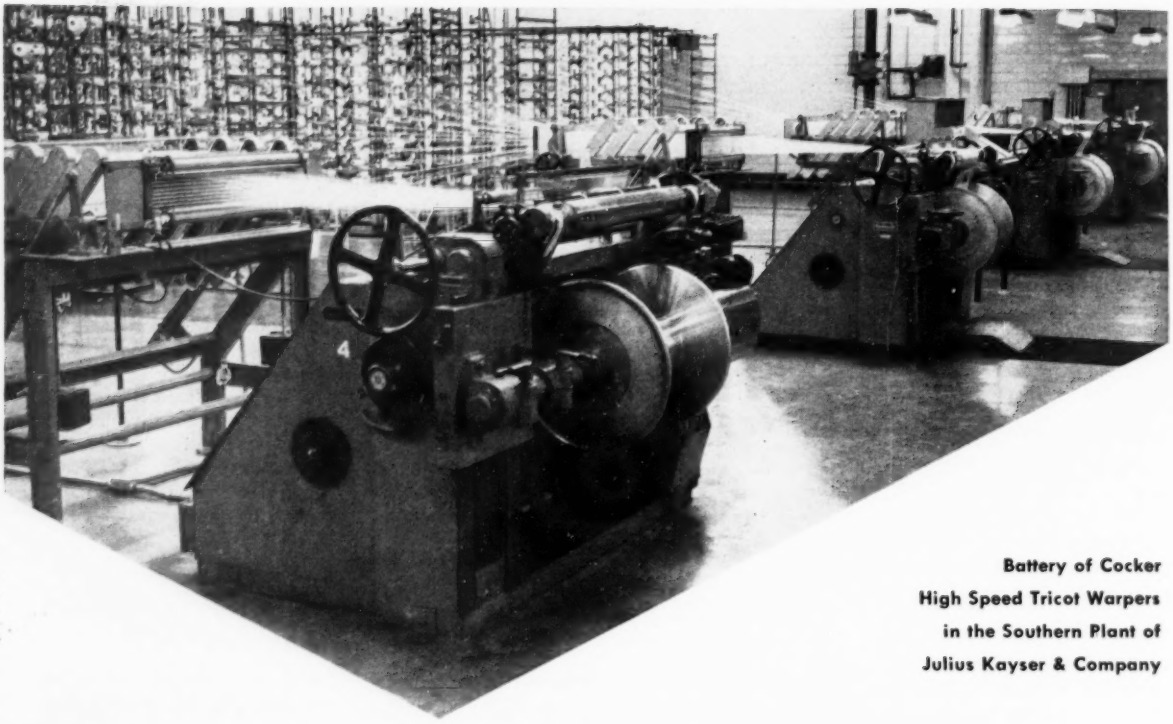
It is the comparatively young, smaller company, which has been going through a period of natural growth, that is most severely penalized by the excess profits tax, the Association said.

Technique Shows Contribution of Fibers in Blended Fabrics

A method for measuring the contributions of fibers to blended fabrics has been announced by Carbide and Carbon Chemicals Company.

The procedure provides for separating and testing each of the component fibers in a blend for strength, wrinkle resistance, press or pleat retention, shape retention, shrinkage, washability, abrasion resistance, and other properties. Chemical extraction is the medium utilized to remove other fiber components completely from a blend. In a Dynel-wool fabric, for example, the wool is dissolved, leaving only the Dynel portion to be examined and tested. The Dynel segment of the finished fabric can also be dissolved with the wool portion remaining for study.

Tentatively called the "Dynel Inner Structure" technique, the method helps the technologist to predetermine in the laboratory the fiber content required to construct in the mill a blended fabric with specified properties for a given end use.



Battery of Cocker
High Speed Tricot Warpers
in the Southern Plant of
Julius Kayser & Company

The Cocker High Speed Tricot Warper

This illustration shows a battery of Cocker High Speed Tricot Warpers for handling beams 21" x 21". . . with Magazine Cone Creel and Electric Eyeboard Stop Motion. These machines can also be built to handle beams 42" between flanges, with 21" diameter flanges.

These warpers are of extra heavy construction with simple and efficient beam doffing, variable speed D. C. drive, with presser roll located back of the beam . . . out of the way of the operator. Included on this equipment is the electronic relay stop motion patented by Deering, Milliken Research Trust, and manufactured by Cocker . . . the most sensitive and efficient stop motion on the market.

New
New
New

The new Cocker High Speed Tricot Warper now includes new design for. air operated Presser Rolls and air operated doffing arrangement; and Magazine Cone Creel with new type Adjustable Tension.

THE LEADER
COCKER
AROUND THE WORLD

Machine and Foundry Co., Gastonia, N. C.

WORLD'S LARGEST DESIGNERS AND BUILDERS OF COMPLETE
WARP PREPARATORY EQUIPMENT

Display Board Guides Electricians

Staff Prepared

EXCLUSIVE

ELECTRICAL connections and contacts for wiring in textile mills must be properly and carefully made if they are to be expected to withstand service through the years. In order to assure uniformly good work, Cone Mills Corporation, Greensboro, N. C., has had its electric shop make up a number of display boards showing standard methods for making those types of electrical

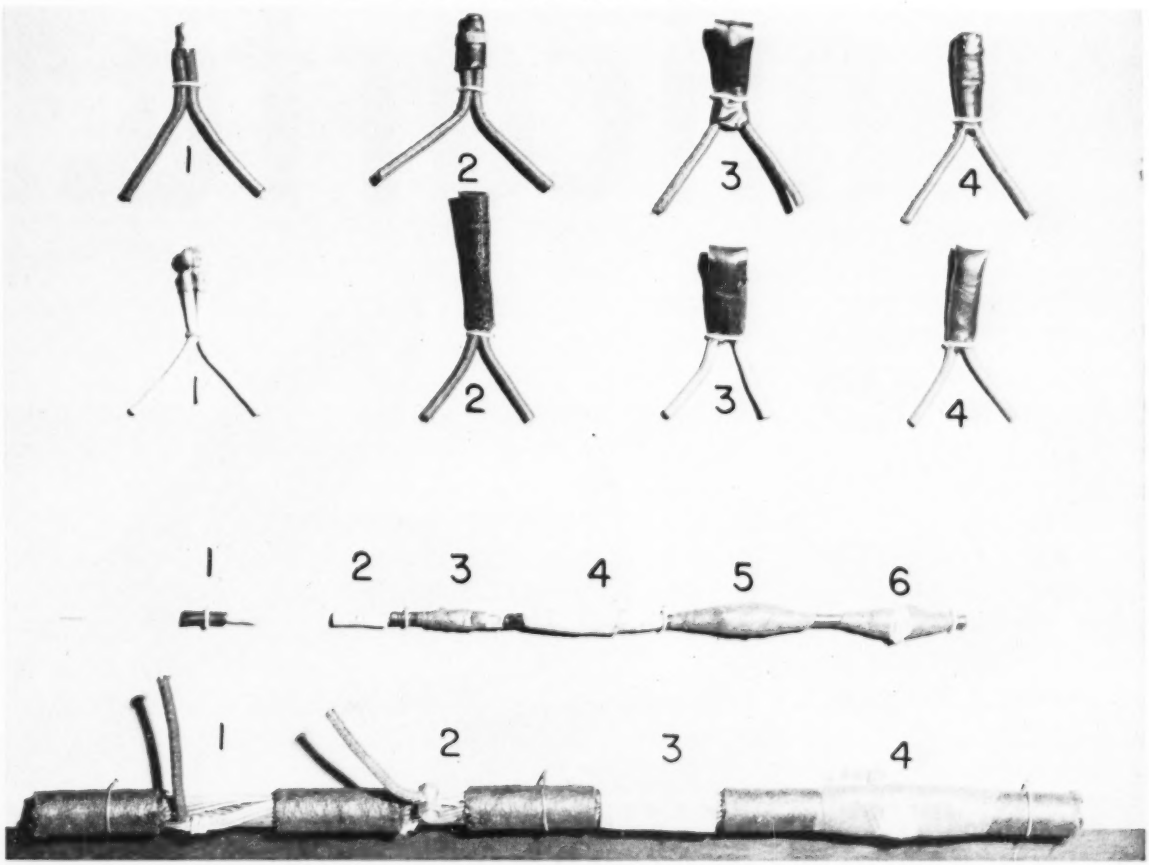
DISPLAY BOARD shows how various types of electrical connections should be made.

Top Row: This type of connection is suitable for lighting wiring. (1) Put splice cap (Buchanan or equal) over wires and solder and crimp. (2) Cover splice with rubber insulating cap. (3) Cover the cap with an endwise layer of rubber Scotch tape. (4) Wrap connection completely with rubber Scotch tape.

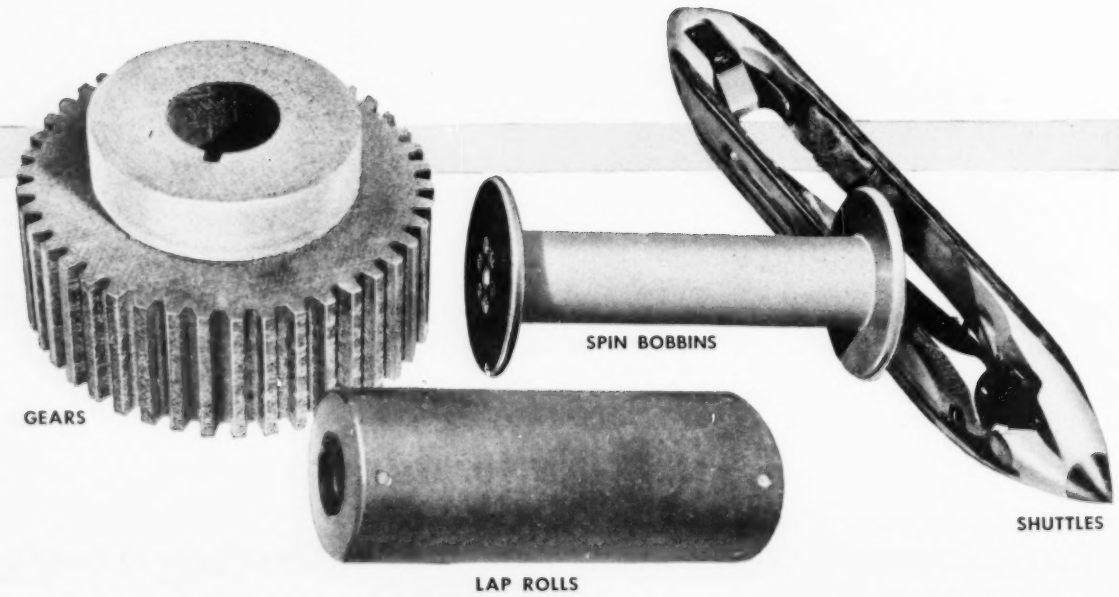
2nd Row: This type of connection should be used on wiring for small motors or similar loads. (1) Fasten ends with StaKon lug or equal. Crimp and solder. (2) Cover this joint with insulating sleeving (spaghetti) about 3 in. long. (3) Fold over insulating sleeving and cover endwise with a strip of tape. (4) Cover entire joint with rubber Scotch tape.

3rd Row: This connection is used on 600 volt power circuits and similar circuits using medium sizes of stranded wire. (1) The stranded wire is tinned. (2) A compression sleeve is used to join the two ends. (3) The joint is covered with two layers of cotton tape, half lap, and painted with air drying varnish or shellac. (4) Two or more layers (depending on voltage) of varnished cambric tape, half lap, are put on over the cotton tape while the varnish is still wet. (5) Finally, the joint is covered with two more layers of cotton tape and again varnished. (6) This shows a cut-away view of the finished joint.

Bottom Row: This shows two types of joints for connecting small wire to large cable, and one type of joint for connecting cable to cable. (1) The small lead is wrapped around several strands of the large cable, and the joint is soldered. (2) An alternate method uses a mechanical connector and no solder. Strands are tinned before making the joint. This makes a quick joint, but it is bulkier and harder to insulate. (3) This shows a cable to cable joint made with a compression sleeve. No solder is used, but the strands are tinned before splicing. All of these connections shown on this row should be covered with cotton and varnished cambric tape as described for third row. (4) This shows a cut-away of a completely covered joint.



here's why... **MORE and MORE mills are turning to micarta®...**



because of these qualities . . .

Saves Weight, weighs half as much as aluminum.
Resists Compression, pound for pound greater than steel.
Resists Impact, absorbs and withstands severe shock.
Withstands Vibration, cushions repeated shock without effect.
Insulates like mica but greater flexibility.
Resists Corrosion, not affected by acids, oils, fumes.
Resists Heat and Cold from −112°F to 212°F.
Resists Moisture, in fact, water is its best lubricant.
Wears Slowly, Evenly, in many cases more slowly than metal.
Reduces Noise, absorbs vibrations, deadens noise.
Fabricates Easily, machined or punched with ordinary tools.

because of these flexibilities . . .

Laminated MICARTA includes standard structural shapes: plates, sheets, angles, channels, rods, tubes and zees. Occasionally this class includes simple molded shapes.

Molded MICARTA is the choice for complicated shapes, large production quantities of either simple or complicated shapes, or for certain properties better obtainable in form molding.

because micarta is basic

MICARTA is a tough and resilient basic material that welcomes comparison with other basic materials. This versatile plastic outlasts wood and metal in many punishing applications. Investigate MICARTA and you'll find it the economical solution to tough production problems.

for more information on how MICARTA can help solve your production problems, and give you advantages no metal can give you, please fill out the coupon below. A MICARTA representative will then call on you personally.

mail it today!

YOU CAN BE SURE... IF IT'S
Westinghouse
micarta

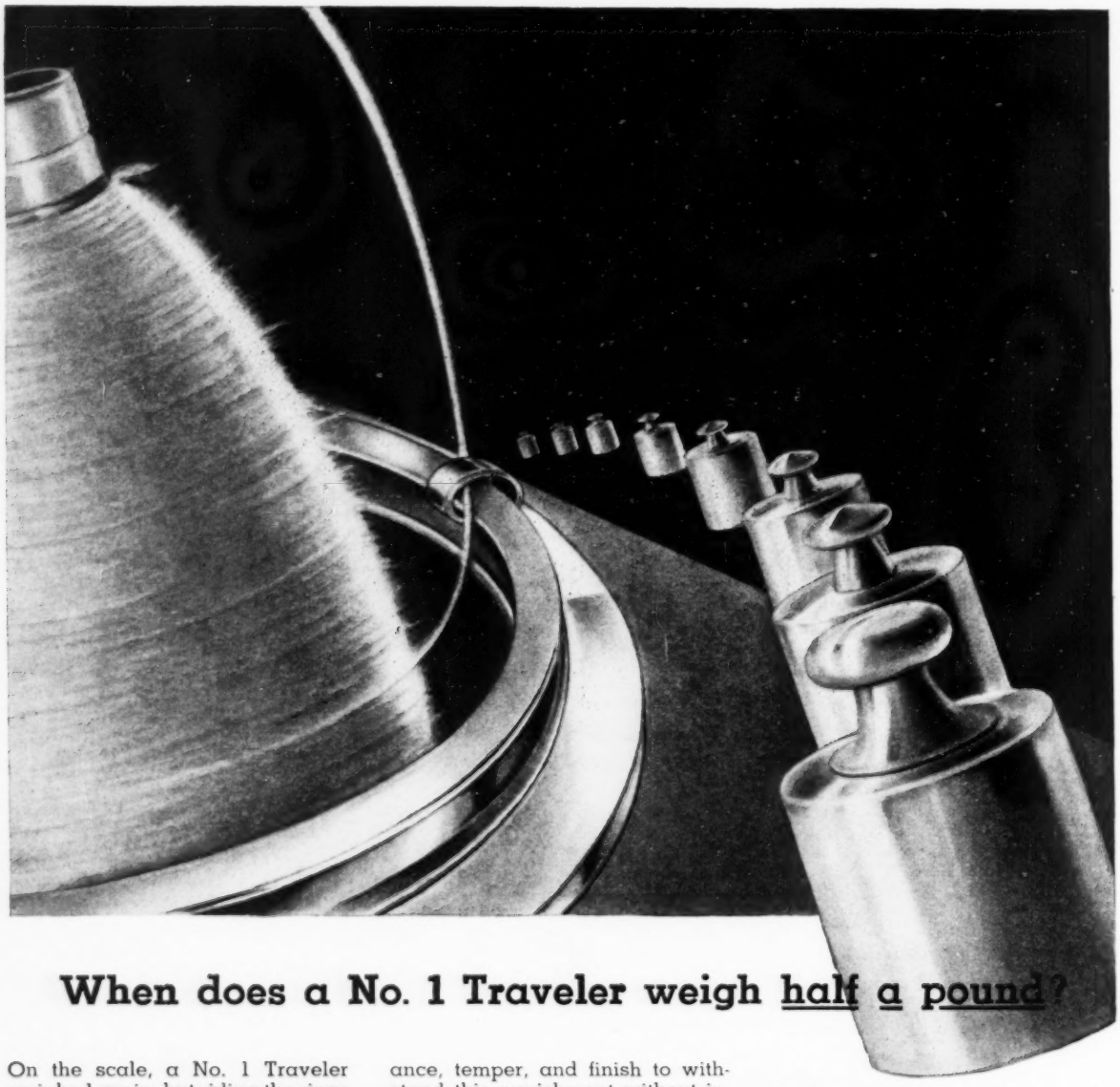
Westinghouse Electric Corporation
MICARTA Division, Trafford, Pa.
Attention: L. A. Pedley

Sir: (Please Check One)

☐ Please have your representative call
☐ Please send me the complete facts on MICARTA

Name _____ Company _____
Address _____
City _____ Zone _____ State _____

J-06501-A



When does a No. 1 Traveler weigh half a pound?

On the scale, a No. 1 Traveler weighs 1 grain, but riding the rings at today's high speeds, it exerts an amazing "pull".

By applying simple dynamic principles to known factors, the centrifugal force can be calculated. For a No. 1 Traveler operating at 9600 r.p.m. spindle speed on a 2½" ring, this force is 3250 grains — almost half a pound!

Consider how this intensifies conditions of wear and friction. You'll see how important it is to choose travelers of the proper balance, temper, and finish to withstand this punishment without interrupting the smooth flow of yarn production.

Victor Travelers are made to serve longer — to deliver more pounds of yarn per traveler — under the toughest conditions. That's why they are first choice of economy-wise mill men for more than 10,000,000 of today's hard-working spindles.

Whether you are running conventional fibers, synthetics or blends, talk to a Victor Service Engineer about your traveler problem. Write, wire, or phone the nearest Victor office . . . for prompt service.

•

VICTOR Ring Travelers

VICTOR RING TRAVELER COMPANY

PROVIDENCE, R. I. . . . . 20 Mathewson St. . . . . Tel. Dexter 1-0737

GASTONIA, N. C. . . . . 358-364 West Main Ave. . . . . Tel. 5-0891

connections which are most frequently encountered in mill wiring. These boards show all the steps required to make the connections, and cut-away samples show the construction of the completed job.

A display board has been made for each mill's electrical shop so that the same type of connections will be made in all the mills in the Cone group.

The Crocking Problem in Naphthol Dyeing

The influence of the three dyeing operations on the fastness to crocking of naphthol dyed shades is discussed by W. Wuterich in "Melliand Textilberichte," Vol. 33, pages 743-7 (1952). Dr. Paul V. Seydel of Seydel-Woolley & Co. translated the article and prepared this abstract for TEXTILE INDUSTRIES.

"In the impregnating operation, the dyer must endeavor to achieve as low a final concentration as possible, or a thorough hydro-extraction; in developing, he must attempt to obtain rapid coupling and the removal of as low a quantity as possible of the naphthanilide that has already been fixed, and the color lake which is formed outside the fiber must be dispersed by using suitable agents; in the aftertreatment, the color lake which has not been fixed must first be thoroughly rinsed off and the color lake dispersed in the aftertreating baths must be carefully removed."

During the impregnation of the goods with the naphtholate, not only are they impregnated with the solution, but some of the naphtholate exhausts substantively onto the fibers. This exhaustion is a reversible process, normally coming to equilibrium in about half an hour, although in some cases the exposure to the dye bath is carried on for 45 to 60 minutes.

The substantivity of the various naphthanilides is different, and the amount of dye exhausted depends on the concentration of the dye bath. Wuterich shows graphs giving the equilibrium concentration in the bath and on the goods both with and without addition of salt, for sixteen naphthanilides. Using these, it is simple, for example, to obtain the amount of Naphthanilide RC needed in a 1:20 bath in order for the goods to pick up 5 gm per pound of cotton. 0.55% concentration will do it.

In addition to the dye exhausted and fixed on the fiber, after squeezing the goods will retain approximately 100% weight of dye bath, including non-fixed dye in solution, which not being fixed will contribute to crocking. It is desirable to keep this amount as low as possible. This can be done in some cases, such as skein dyeing, by centrifuging.

Selection of a naphthanilide with greater exhausting power is advisable where possible. Where not possible, greater exhaustion may be obtained by the use of sodium chloride or Glauber's salt, which drives the equilibrium toward the direction of fixed naphthanilide on the fiber by decreasing its solubility in the dyebath. The less naphthanilide mechanically retained on the fibers, the less the crocking tendency. Care must be taken, however, not to add the salt too fast or too soon, as it may cause precipitation of the naphthanilide in the bath, again giving particles which will contribute to crocking when they are picked up on the goods.

Since the alkali used in the first process will react with the diazo solution faster than the naphtholate coupling proceeds, acid or acid salts must be present which will keep the solution between 3 and 7 pH. The pH should be controlled to the point at which the coupling proceeds most rapidly, because the goods containing the naphtholate, on being introduced into a bath without naphtholate, will begin to lose this component, as an equilibrium between fixed material and material in solution will again be approached, causing loss of fixed naphtholate.

The mechanically deposited particles will also be coupled, leaving deposited color in the fibers to increase crocking. Further, any naphtholate dissolved off the goods before completion of coupling will be coupled in solution, giving insoluble, particles which are picked up by the fibers mechanically, as by a filter.

Two things may be done to minimize this tendency. Salt may be used in the coupling bath to decrease the solubility of the naphtholate. Dispersing agents may be used to keep the particles formed in the bath so finely dispersed that they will remain in the bath and not be picked up on the surface of the goods.

In order to increase the light fastness, the goods must be aftertreated, using normally alkali, soap or certain synthetic detergents. The effect of these materials and the heat used swells the fibers and drives the dye deeper into the capillaries of the fibers, where it is deposited as partly crystalline, partly amorphous particles, the process being often accompanied by a shade change.

Since some of the dye particles come to the surface instead of going into the capillaries, these will contribute to the crocking tendencies. Soap or a number of synthetic detergents will help to rinse off these particles. For a most effective rinsing, the temperature must be kept high until the treatment is finished, then lowered gradually. A hot rinse at 140-160 F using a dispersing agent should follow to prevent reprecipitation of color in the liquor left on the goods, followed by repeated rinsing at 100-120 F until the rinse water is colorless.

The more mechanical agitation given the goods in this after-treatment and rinsing, the more effective will be the removal of non-fixed dye particles. For this reason, jigs and continuous machines may need more dispersing agent and more rinsing than dye becks.

Autofill winding filament rayon from magazine cone supply

A bad beginning never makes for a good ending. If your filling bobbins are full of hollows and ridges and if your yarn has been frayed by builder wheels on the winder, you simply can't produce a first class fabric and your weaving costs are multiplied.

You can greatly improve the quality of your fabrics and reduce your cost of weaving by using Foster-Muschamp Autofill Winders (fully automatic). This is because the Autofill does NOT use a builder wheel. It determines the lay of the yarn on the bobbin by means of gears rather than friction wheels and produces a precision wound product which is entirely free of hollows, ridges and filaments broken due to builder wheel friction.

Result—a much better fabric at much less cost.

You want better weaving at less cost on all your fabrics, of course, but it is particularly important if you are weaving fine denier yarns, such as 30 denier nylon. In such cases, because your materials cost is high, losses due to damage become astronomical.

Get all the facts about the Foster-Muschamp Autofill. Send for Bulletin M-1 today.

FOSTER MACHINE COMPANY
Westfield, Mass., U.S.A.
Southern Office—Johnston Bldg., Charlotte, N. C.

Our Debt to Technology

"It is impossible to prophesy what the next 50 years may bring forth, because 50 years ago many of our commonplaces were undreamed of except in the minds of a few inventors who had not yet developed a technology for putting their ideas into effect."

By RINGGOLD ARDEN

EXCLUSIVE

WEBSTER'S Dictionary defines technology as "Industrial science; the science, or systematic knowledge of the industrial arts." The word comes from the Greek word, *technologia*, meaning systematic treatment. Technology operates as a sort of chain reaction—one fact leads to another, and sometimes a tiny bit of apparently useless knowledge proliferates into a vast industry.

Virtually all of our marvelous industrial and scientific developments have come into existence in less than 200 years. In 1768, Arkwright invented his spinning jenny, and this was literally the mother of the Industrial Revolution. The new spinning machine was coldly received in most quarters. The general opinion seemed to be that it was a dastardly attempt to destroy the means of livelihood of thousands of persons who eked out a miserable existence spinning yarn by hand, with foot-power machines.

The ancient spinning frame was invented so long ago that there is no record of when it first appeared, but for several thousand years there was practically no technological improvement in the basic principle of the spinning wheel and its spindle. Arkwright seems to have been the first person in these thousands of years to give any serious and practical thought to the possibility of improving the method of making yarn.

For about 15 years after the invention of this spinning machine, Arkwright fought with the British Patent Office to recognize his invention and grant an exclusive patent. A British court finally ruled against him, and it seems that the general opinion was that this was a dangerous innovation from which no good could possibly come.

Arkwright's machine was a very crude piece of apparatus because the technology of his day was as crude as his machine. Crude as it was, it thoroughly frightened the economists and statesmen of that time, who had visions of armies of unemployed people sitting hungry outside of factories where a handful of persons were able to make all of the yarn that the country needed. This spinning frame was literally the first building block in our present industrial structure.

In spite of the general disapproval of mechanized spinning, there were farsighted persons who realized what could happen to world trade if goods could be produced far more cheaply than they had ever been made before. A few persons, but unfortunately only a few, realized that multiplying the productivity of workmen did not exhaust a market, but rather expanded it.

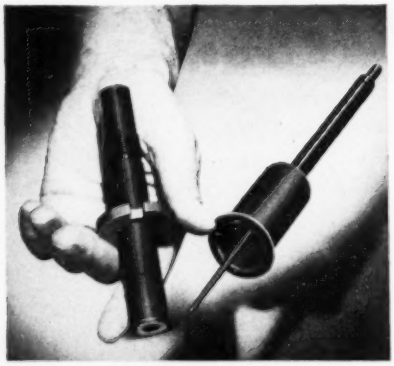
The existence of this spinning machine set in motion a whole train of technological developments. There was need for better spindles and better steel for making spindles; need for better castings and better methods of producing pig iron which would make good castings; need for better lathes and planers and drill presses and other machine shop equipment for making this spinning machinery; need for a power loom to use up all of the yarn that the more productive spindles could turn out; need for a knitting machine to produce goods faster than human fingers could—in short, need for thousands of things sprang from this first basic invention. As each of these thousands of things came into being, it in turn gave birth to other needs and other opportunities.

It is an amazing thing that for thousands of years the human mind devoted so little of its capabilities to the development of a systematic knowledge of the industrial arts to form a growing technology. Thousands of years ago somebody built the first wheel and the first crude wheeled cart. The carts, wagons, and carriages of 200 years ago were only slight improvements on the first rude construction of a primitive inventor. The saw has been known for thousands of years, but apparently it never occurred to anybody to make a round saw which turned and cut continuously. Why so little occurred to the ancients, and so much began to occur to modern men after small beginnings about 200 years ago, is hard to explain except on the grounds that there was apparently little effort made to develop a technology.

Ancient philosophers left records showing that they had conceived many of our modern inventions. The principle of the steam turbine or steam engine had been mentioned by some Greek philosophers 2500 years ago. Leonardo da Vinci designed an airplane and a submarine. None of these ancient or medieval thinkers, however, had access to an industrial system capable of manufacturing the things that they imagined. The monk, Roger Bacon, in England hundreds of years ago, actually invented a steam engine and boiler, and it is said to have operated, but the boiler was such a flimsy affair, devoid of safety valves or steam gauges, that it prematurely exploded and Bacon was saved from

Now you can be sure of CLEANER YARN...

one of many advantages of this new uptwister spindle



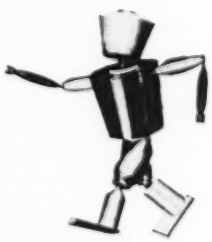
UNIFLEX SPINDLES have no free oil. Therefore no oil spray can soil your yarn. Proof is shown by absence of oil drip when fully lubricated step is held upside down. Sealed felt pads, lubricated by injection only once a year, meter oil to the bearings through porous bronze bushings.

FLEXIBLE LOWER BLADE cuts down vibration . . . reduces bearing loads . . . lengthens spindle life . . . lowers power consumption. Uniflex Roller Bearing Spindles are standard equipment on all new Unirail Uptwisters.

Reduce your costs, too, with NEW UNIFLEX SPINDLES on your uptwisters

Lower Power Costs. Because the Uniflex lower blade reduces bearing loads. Also, both upper and lower bearings are especially designed to cut power requirements, while a hardened steel ball takes the entire thrust load on a small area of contact . . . another power saving feature. Field tests to date indicate power savings of more than 15% over plain bearing spindles.

Lower Maintenance Costs. Because the Uniflex Spindle greatly reduces oiling and cleaning cycles and other attention. Less vibration means less heat and wear, for longer, trouble-free service life. Uniflex Roller Bearing Spindles not only assure a cleaner product but more economical production.



WRITE FOR BULLETIN S1. Get all the information about how Uniflex Spindles make uptwisters produce more and better yarn at lower costs.

UNIVERSAL WINDING COMPANY

P. O. Box 1605, Providence 1, R. I.

Boston, Philadelphia, Utica, Charlotte, Atlanta, Chicago, Los Angeles; Montreal, Hamilton, Canada; Manchester, England; Paris, France; Easle, Switzerland

Agents in every principal textile center throughout the world

Winding and Twisting Machinery for Natural and Synthetic Yarns

23.2.4

the stake as a sorcerer only by his priestly vestments.

Gunpowder was known to the Chinese many hundreds of years ago, but it was used principally in fireworks for festivals and celebrations. Some practical Europeans who got hold of it in the Middle Ages built crude cannons, but here again, the imaginations of the foundrymen and steel workers failed to develop means of making useful firearms for several centuries.

Suddenly toward the end of the Eighteenth Century, thousands of good minds began to be interested by the challenge of the technological problems presented by many of these inventions, and the chain reaction of technology began to be felt. As one building block was laid upon another in this constant search for knowledge and for better methods of manufacture, an impressive edifice of technological knowledge was built. The inquiring mind, which had been stifled for thousands of years by superstitious fears and rigid customs, now began to explore every possible avenue of knowledge which might have some useful results. In every European country and America, there was a great upsurge of interest in probing the secrets of nature to turn natural forces to human advantage. All of our wonderful scientific and industrial system has been built up by the painstaking and persistent addition of knowledge to previous knowledge.

In spite of all that has been accomplished by our technology in the improvement of the lot of our people, there is still a lurking suspicion here and there that we have gone far enough with mechanization, and that at any time we may expect to see millions of people thrown out of work by ingenious machinery. In spite of the fact that for nearly 200 years each ingenious machine has led to better living and new methods and new demands to create employment opportunities, working people are reluctant to abandon the belief that the machine is their enemy, instead of their best friend.

It is hard to measure, or even to understand, the improvements in our standard of living and our methods of life as compared with those in Colonial Times. Tremendous new developments, offering employment opportunities for millions of persons, are taken for granted and no longer looked upon as miracles. While the foundation for all of this tremendous technological improvement was laid more than 150 years ago, our industrial system has just begun to reach its full flower within the last 40 or 50 years. It is im-

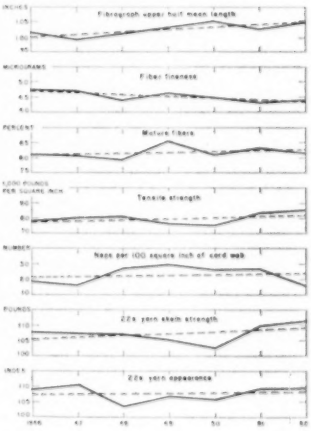
1952 Cotton Fiber and Spinning Test Results

The results of tests on fiber and manufacturing properties of the principal varieties of cotton produced commercially by cotton improvement groups for the 1952 crop are summarized in a recently published United States Department of Agriculture report.*

Cottons are grouped according to processing procedures employed in making spinning tests, facilitating comparisons of the performance in spinning of the principal varieties of cotton as produced in various areas throughout the cotton belt.

Some of the varieties represented in 1952 crop are reported for the same areas that were included in studies on the 1946, 1947, 1948, 1949, 1950, and 1951 crops, affording comparisons of test results over a seven-year period in many instances.

Seasonal averages for selected fiber properties and carded yarn processing results included in the series of reports on crops from 1946 to 1952 are shown (see accompanying illustration).



Test Results and Analyses. Tests performed in spinning laboratories support the generally accepted facts that decreasing the card production rate results in fewer neps, better yarn appearance grades, and removal of more card waste.

Average quality of all upland varieties declined as harvesting season progressed.

Grade index of upland cotton (Middling=100) was reduced from 101.7 for early season lots to 95.7 for late season lots. Accordingly, picker and card waste increased from 6.8% to 8.4% for the early and late season crops, respectively. Trend in grade index was also apparent in color values of cleaned lint from Shirley analyzer as measured by Nickerson-Hunter cotton colorimeter.

Average skein strength of 22s yarn decreased from 115 pounds for early season cottons to 108 pounds for late season cottons. Staple lengths of late-harvested cottons averaged only 1/64th inch less than did the early season samples; however, fiber tensile strength was reduced from 86,400 psi to 83,700 psi during the harvesting season.

Fiber fineness (Micronaire) decreased from 4.45 micrograms for early season to 4.26 for late season cottons. Fiber maturity declined from 82.0% to 80.8%. Season averages for neps observed in card web varied from 17 per 100 sq in. of card web for early season cottons to 15 for midseason, back to 16 for late season cottons.

*"Summary of Fiber and Spinning Test Results for Some Varieties of Cotton Grown by Selected Cotton Improvement Groups, Crop of 1952," Cotton Branch, Production and Marketing Administration, United States Department of Agriculture, Washington 25, D. C.

possible to prophesy what the next 50 years many bring forth, because 50 years ago many of our commonplaces were undreamed of except in the minds of a few inventors who had not yet developed a technology for putting their ideas into effect.

THE TEXTILE INDUSTRY, which was the mother of the Industrial Revolution, has not stood still. Perhaps the most startling illustration of the tremendous gulf which separates the old methods from the new is offered by the textile industry itself, because if the methods of producing yarn and cloth 200 years ago were still employed there are not enough persons in the United States to equal our present production of textiles, if all of these people did nothing else from dawn until dark but work at the production of yarn, cloth and knit goods.

Everything that we have accomplished to improve the lot of our people has been done by liberating people from one job to do another one. Years ago the telephone companies established all connections manually with telephone operators. The invention of an automatic telephone was looked upon with dismay by these telephone operators, since it seemed certain that practically all of them would be looking for jobs if this automatic equipment came into general use. Today, the telephone companies are almost completely mechanized, but they employ more persons now than ever before.

The same is true of almost every industry. The more cheaply it can produce goods, the more people it can employ to produce them; and in order to produce goods more cheaply, thousands of toolmakers and machinists and designers must be employed to work out the improved technologies.

There is no foreseeable limit to what our developing technology can accomplish if it is given free rein to do everything it can do, with as little artificial interference as possible.

New Method for Preparing Wool Tensile Strength Fiber Bundles

A procedure for use of the Suter Sorter in preparing two-inch fiber bundles for tensile strength tests of wool has been developed by the Fred Whitaker Company. Announced at the recent Committee D-13 meeting of ASTM, the new technique is being considered for adoption as a standard and will be submitted for letter ballot.

Loose wool should first be formed into a sliver by hand.

1. Set up Fiber Sorter as per procedure on page 493 ASTM Manual 1952.
2. Place sliver in section of combs with the long needles and press down with the depressor.
3. The width of the sliver in the combs should not exceed the width of the clamp.
4. The end of the sliver should extend at least 2 inches in front of first faller. (In the case of a hand prepared sliver from loose scoured wool, this may be reduced to 1 inch.)
5. Draw out by hand those fibers extending more than 1 inch. Square off end of sliver by means of the clamp at this point.
6. Firmly grip the fibers across the full width with the clamp, to a depth not exceeding ⅛" from the end of the squared off sliver and carefully draw out fibers.
7. Draw the fibers held by the clamp twice through the small combing bar (avoid rough handling as this breaks tangled fibers).
8. Draw the fibers through the side of the fallers with the shorter needles until the clamped ends reach the front faller.
9. Release the fibers and press them down with the depressor.
10. The operations (6 through 9) should be repeated until the bundle of fibers between the 2" and 2½" fallers is accumulated to the extent that a bundle of these same fibers 2" long weighs about 0.075 gm. The bundle formed should not be wider than the width of the drawing clamp.
11. Remove the original sliver and set aside.
12. Allow the bundle to remain in the fallers and then, with a small pair of pointed scissors carefully cut the fibers in the bundle between the 2½" and 3" fallers.
13. Drop all fallers beyond 2½".
14. Put retaining bars in place (as per fiber length test).
15. Turn Sorter 90° to the right (i.e. the bundle now lies from left to right).
16. Raise the last 6 fallers (12½" to 15").
17. Drop the 2½" faller.
18. With the clamp, carefully remove the fibers extending beyond the 2" faller.
19. Comb these fibers once through the small combing bar and place them in the six fallers at the right (12½" to 15").
20. Repeat this until all fibers beyond the 2" faller have been reset.
21. All other fibers shorter than 2" shall be discarded.
22. Using the scissors, cut off all fibers extending beyond the 15" fallers and all fibers extending in front of the 13" fallers. The fibers should be cut right at the pins in both the fallers so that the length does not significantly exceed 2 inches.
23. Carefully lower the 13" and 15" fallers.
24. Grasp the fibers about ¼" from one end with the clamp and carefully lift upward.

The bundle is now ready to be weighed.

The method described is adapted to the 15" Suter wool fiber stapling apparatus. With alterations, it may be carried out with two Baer, Zweigle, or 8" Suter Sorters, or any other sorter with two banks of combs. It should be noted that the method is equally adaptable to lengths other than 2" bundles and also would readily lend itself to tensile strength determinations on the various length increments present in a given wool sample.

The Physical Testing Laboratory at Fred Whitaker Company is able to prepare bundles by this method in 7 to 9 minutes, depending on the fineness of the wool fiber.

WHY ALGOSOLS

AN EASY ROAD TO VAT FASTNESS

ALGOSOLS are water soluble esters of vat dyes. They produce the same brilliant shades and have the same fastness properties as the parent vat dyestuffs from which they are derived. On cotton and rayon they are more level dyeing and have better penetration than ordinary vats. Prints are smoother and clearer than normally applied vat dyestuffs. On wool Algosols have superior light and wash fastness without impairment to the quality of the wool. The method of applying Algosols is simple and inexpensive.

COTTON

Mercerized cotton piece goods of constructions otherwise difficult to color, have outstanding smoothness and penetration when dyed with Algosols. The shades of colored yarns used for cross-dyed effects in striped shirtings, etc. are not affected when over-dyed with Algosols. Mercerized and other types of cotton yarn dyed in package dyeing equipment are uniform, evenly colored from outside to center and free from crossovers.

WOOL

Suitings dyed with Algosols have excellent fastness properties even in light shades. Blankets and knitting yarns have outstanding fastness to light and washing. Algosols are recommended for dyeing slubbing and yarns in circulating machines. Shrink-proofed wool dyed with Algosols has excellent fastness to light and repeated washings. Wool can be dyed with Algosols without impairment to the quality of the wool.

RAYON

Rayon piece goods composed of filament, spun rayon or filament-spun rayon yarn when dyed by the continuous method or on the jig have solid, clear shades and excellent fastness. Rayon skeins are easily dyed on the 'Cascade' type machine. Algosols are excellently suited for dyeing packages and cakes in pressure dyeing equipment.

PRINTING

In roller, screen and resist printing prints are smoother and colors clearer than the normally applied vat dyestuffs from which they are derived. Algosols have excellent light and wash fastness and do not crock. Blotch printed drapery fabrics have smooth grounds with excellent fastness to light and washing. Algosols are ideal companion colors for Rapidogens and Fast Color Salts.

MIXED FIBERS

Suitings and dress goods of spun rayon and wool blends dyed in solid shades meet all fastness requirements. Special effects can be obtained on cotton-wool and rayon-wool mixtures by dyeing the wool and leaving the cellulosic fibers undyed or on viscose-acetate blends the viscose can be dyed fast color and the acetate tinted to yield two-tone effects.

COST

The simplicity of application, saving in time, lower cost of chemicals, superior dyeing and printing results offset any increase in dye cost over ordinary vats in light and medium shades. Not infrequently Algosols prove cheaper in light shades.

✓ **DELIVERIES**
Stocks are carried in warehouses located throughout the country.

gdc

Technical information, product samples and the service of a highly trained technical staff are yours for the asking.

GENERAL DYESTUFF CORPORATION

435 HUDSON STREET • NEW YORK 14, NEW YORK

BOSTON • CHARLOTTE • CHICAGO • PHILADELPHIA • PORTLAND, ORE. • PROVIDENCE • SAN FRANCISCO

Always Uniform

Precision is never an accident. Unvarying quality must be put there by the maker . . . whether it's in Victor Mill Starch, bolts or screws.

Mill men know that Victor's uniformity shows up in better penetration, stronger warps, greater smoothness, fewer slashing problems.

That's why both Victor and the Keever man are known as "The Weaver's Friend."

TEXTILE SALES DIVISION
1200 WOODSIDE BUILDING
GREENVILLE, SOUTH CAROLINA
Charles C. Switzer, Manager

THE KEEVER STARCH CO. ★ GENERAL OFFICES ★ COLUMBUS 15, OHIO

Corn, wheat and other grain products for industry since 1898

HOW OTHER MEN MANAGE

• Letters to Editor • Technical Discussion •
• Manufacturing Briefs • Kinks & Short Cuts • Comments from Readers •

Write to the Editors!

Readers are invited to make use of this section for further discussion of published articles, or for discussion of problems arising in the plant. Names will not be used without permission. Payment is made for practical articles or for letters containing manufacturing information.

Address: Editor "Textile Industries," 806 Peachtree St., N. E., Atlanta, Ga.

More on Slow Card Grinding

EDITOR TEXTILE INDUSTRIES:

I read with interest the article "Slow Card Grinding Reduces Neps," which appeared on page 175 of the September, 1952, issue of TEXTILE INDUSTRIES. In view of the interest evident on the subject of slow grinding, the following comments should be of value.

Actually, slow grinding means the slow running of the cylinder and doffer while maintaining the standard fast grinding speed of the traverse grinder.

Fast grinding means grinding at normal card working speed and has been practically universal and accepted as the standard for grinding.

Slow grinding is nothing new, and some makes of cards have been adapted to permit grinding while the cylinder and doffer revolve at slow speeds.

In England the Factory Act, which is now in operation, prohibits changing the driving belt; therefore it is necessary to have some efficient method of reversing the card cylinder without taking the belt from the driving pulleys. The method now adopted by practically every mill in England, and some mills in other countries, is what is termed "slow grinding by the dandy pulley drive."

A three-grooved dandy pulley with pinion replaces the ordinary dandy pulley and is driven from the rim of the loose cylinder driving pulley, the other two grooves driving the grinders. This evolves in the slow running of the cylinder and doffer. To obtain the best results, the traverse wheel grinders should be fitted with slow-traversing differential motions, which revolve at 750 rpm and traverse the grinding disc 25" in one minute.

There is no doubt that a truer surface is obtained by slow grinding, and many carders maintain a better carding point. On the other hand, there are also many managers and carders who still prefer to grind at fast speeds; they maintain that the surface obtained by fast grinding is the working surface under which the card operates.

NOTE: For the purposes of calculation it is assumed that the card has a 16 in. diameter driving groove on the loose pulley running at 170 rpm, a 216T doffer wheel, and that a 20T change wheel is used on the dandy pulley.

The grooves on the dandy pulley are 10 in. diameter driven and 14 in. diameter driving the grinders; one on cylinder, one on doffer.

Therefore, doffer speed is:

$$\frac{170 \text{ rpm} \times 16 \text{ in.}}{10 \text{ in.}} \times \frac{20}{100} \times \frac{40}{216} = 10 \text{ rpm}$$

The cylinder is driven from the doffer by means of a flat belt,

KINK CONTEST!

$100 will be awarded the winner.
Send your entry now!

This contest ends July 15, 1953.

Every kink, short-cut, time-saver, or quality improvement suggestion entered in the contest will be paid for immediately upon acceptance. The $100 award will be made as soon as all entries are judged.

The contest rules are simple:

► All contributions must be postmarked not later than midnight, July 15, 1953.

► No limit to the number of entries an individual may submit in any one contest.

► All entries paid for upon acceptance—no waiting. Extra payment for photographs that are usable. Extra consideration is also given kinks accompanied by legible pencil sketches or drawings.

► Entries must not have been published previously.

Send your contest entry to:

Editor TEXTILE INDUSTRIES, 806 Peachtree St., N. E., Atlanta 5, Georgia.

maximum
efficiency
and greatest
economy

RAPIDASE®
for removal of starch sizes

SERIZYME®
for removal of protein sizes

for de-sizing

ask for our latest bulletin on
continuous de-sizing

WALLERSTEIN COMPANY, INC. 180 MADISON AVENUE, NEW YORK 16, N. Y.

sizes of pulleys being 12 in. diameter driving, to 18 in. diameter driven.

Therefore, cylinder speed is:

$$\frac{10 \text{ rpm} \times 12 \text{ in.}}{18 \text{ in.}} = 6.6 \text{ rpm}$$

With a 5 in. diameter pulley on the grinder, the grinder speed is:

$$\frac{170 \times 16}{10} \times \frac{14}{5} = 760 \text{ rpm}$$

Assume cylinder 50 in. diameter, and doffer of 25 in. diameter.

Surface speed of cylinder is:

$$\frac{50 \times \pi \times 6.6}{12} = 86.4 \text{ ft per minute}$$

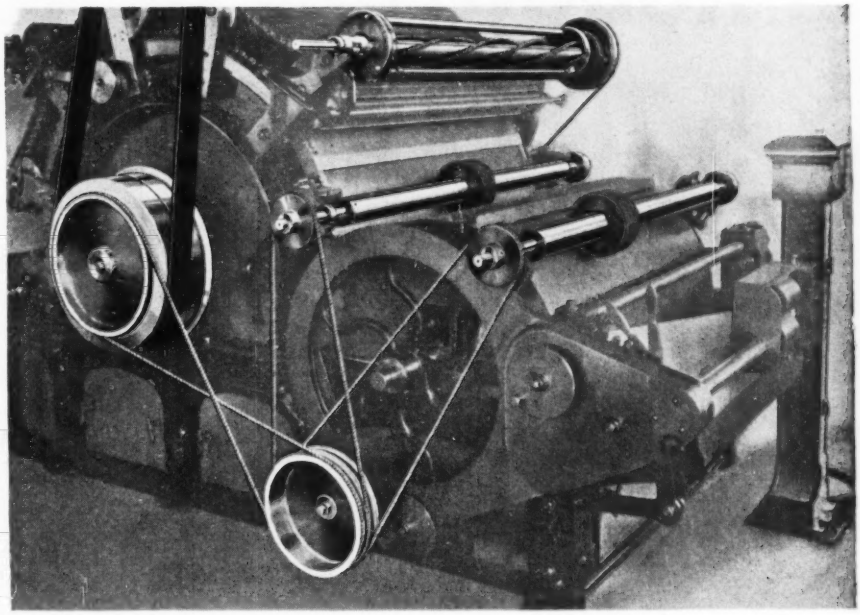
Surface speed of doffer is:

$$\frac{25 \times \pi \times 10}{12} = 65.4 \text{ ft per minute}$$

Surface speed of grinder with 7-in. diameter disc is:

$$\frac{7 \times \pi \times 760}{12} = 1390 \text{ ft per minute}$$

The article previously appearing in TEXTILE INDUSTRIES and to which we refer in the first paragraph advocates slow running of the grinder. From tests made over many years, we do not recommend any slower speed of a traverse grinder than the standard speed of 750 rpm. This speed with a standard 150″ differential motion will give three traverses per minute across a 40″ card, i.e., one-and-a-half complete trips a minute.



Card grinding drive employing dandy pulley and ready for operation.

For slow grinding, the traverse grinders should be fitted with 25″ differential motions which will traverse the grinding disc 25″ in one minute, while revolving at 750 rpm. The question of grinding is of paramount importance and the greatest care should be taken to obtain the best carding point.

CONTRIBUTOR No. 8576
(England)

Difficulties on 10 x 5¼ Roving Frames

EDITOR TEXTILE INDUSTRIES:

We have some new 10 x 5¼ inch roving frames that are giving us quite a bit of difficulty. To date the manufacturer has been unable to correct these difficulties. We hope that we may obtain corrective information if you will be kind enough to allow our case to be presented to your readers.

The trouble is evident when ends run under or over; that is, when the rail changes direction, an end (or ends) falls over the top or under the bottom. At times the amount run over or under is so slight that the end continues to run and does not come down. This condition is much worse after the bobbin has become three-fourths full. After the three-fourths mark has been obtained and the frame is stopped, running under or over almost always occurs at the next change. There seems to be no pattern as to which spindles cause this trouble.

At the present time, to overcome this trouble we have had to increase the angle of taper to exceed the manufacturer's recommendations. This only gives us a 22-oz bobbin, and we feel that we should obtain a 26-oz bobbin.

Our range of roving is from .80 hk to 2.25 hk. This trouble of running over and under is much worse with the higher counts than it is with coarse roving.

The technical data for the 2.25 hk roving are as follows:

950 rpm spindle speed
55 gr sliver in creel
1.31 twist multiplier
14 coils per inch
English type builder

We have tried various lay and tension combinations but have been unable to eliminate this condition when the proper taper gear is used.

We shall greatly appreciate any help your readers may give us in this matter. CONTRIBUTOR No. 8533

EDITOR TEXTILE INDUSTRIES:

This is in reply to CONTRIBUTOR

PRODUCTION UP 18% WITH 5 TO 1 LABOR SAVINGS!

AT AN EASTERN MILL, under the old system of yarn processing that required six steps up to and including the reducer, one operator could produce only 32 pounds per hour. Now, with Pin Drafters doing the same job in only three steps, the hourly production for one operator is 165 pounds —*better than 5 to 1.*

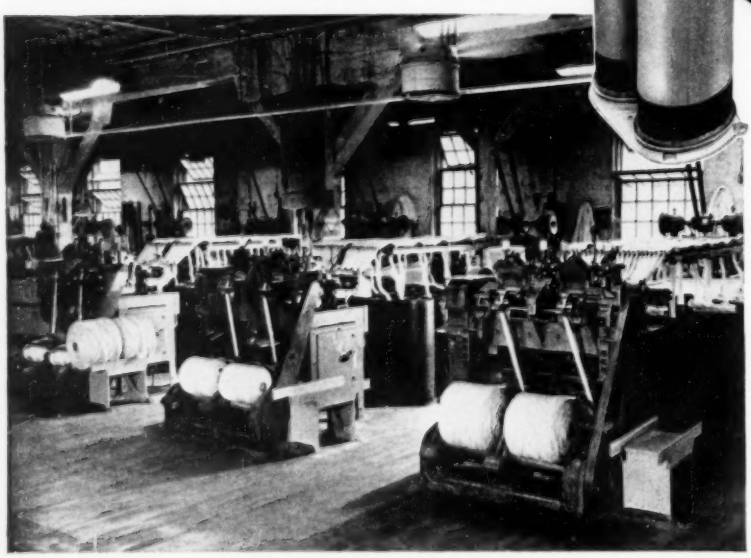
Other production improvements also resulted from the Pin Drafters' use in the combing and drawing departments. Packaging has been cut in half—from 64 packages weighing 5 pounds each, to 32 packages weighing 20 pounds each—thus enabling the reducer to run 8 to 12 hours without creeling. Waste has also been reduced considerably.

The Pin Drafters are used to parallel, draft, and integrate both wool and nylon at this mill, producing a loftier, more even, and better appearing yarn.

If you would like to investigate the profit possibilities of using Pin Drafters in your plant, call in our Field Engineer in your territory. He'll give you complete details and show how it will fit into your operation.

WARNER & SWASEY PIN DRAFTER

- Eliminates costly steps in preparation of sliver for roving
- Produces better, more evenly blended sliver in greater volume
- Uses either combed sliver or ball top
- Discharges to coiler cans or to single or double mesh balls
- Applicable to French, Bradford or American systems



BRANCH OFFICES:

61 Rivulet St., North Uxbridge, Mass.
6910 Market St., Philadelphia, Pa.
Candler Building, Atlanta, Ga.
1820 Browning Ave., Charlotte, N.C.

WARNER & SWASEY
Cleveland
PRECISION MACHINERY SINCE 1880
TEXTILE MACHINERY DIVISION

YOU CAN PRODUCE IT BETTER, FASTER, FOR LESS WITH WARNER & SWASEY MACHINE TOOLS, TEXTILE MACHINERY, CONSTRUCTION MACHINERY

No. 8533 and the trouble on his roving frames.

First, this is a common complaint about the English type builder. Many mills have this trouble, and unless CONTRIBUTOR No. 8533 has modified the butterfly and the latches, the trouble will continue to occur.

In my opinion the reason for the trouble is that the top of the tumbler, or butterfly, has either worn or the points of the latches are worn. Possibly the points of the latches were not properly shaped when received from the manufacturer.

When we put in our new 10 x 5¼ inch H & B roving frames, we took out the tumbler and cut off the projecting edge. We then had a case-hardened block made 1¼ inches across the top and 1⅛ inches across the bottom, the width remaining the same. This was inserted at the top of the tumbler bracket just as it was originally sent to us from the manufacturer. Of course the top of the tumbler is milled off so that this piece will fit down into the tumbler bracket and not be allowed to move.

Then the latches are built up on the bottom ends to correspond exactly to the taper which is on the top of the tumbler. This means that the bottom of the latches is ⅛" longer than the top, and the opposite is true on the tumbler bracket. If these two tapers are fitted exactly and the latches are set accordingly so that there is plenty of tension on the springs, the trouble may be eliminated without any further changes. It is simply a matter of the latch reaching the top of the tumbler as it is turning so that the latch either slips off or hangs slightly. This causes both the under run and the over run.

All of our frames have been changed, and we have eliminated the trouble completely. I know of several mills in which the trouble was remedied by simply welding onto the top of tumbler bracket to make the ⅛ inch taper or by cutting it out and supplying the small part in place of it. If your CONTRIBUTOR No. 8533 does not understand the suggestions, we can let him have one of our small inserts, and he can make several just like it for inserting into the top of the tumbler bracket. I believe that his card room man can tell from this note what should be done to obtain a taper and provide more contact and less likelihood of slippage or hanging on the change.

CONTRIBUTOR No. 8534

EDITOR TEXTILE INDUSTRIES:

In connection with the letter from CONTRIBUTOR No. 8533 in which he points out trouble he is having with his 10 x 5¼" roving frames in that the roving at times will run over the top or under the bottom of the bobbin:

I am afraid that we will not be able to help this gentleman much for the simple reason that it appears from the size of the package and the fact that the frames have an English builder, that this is an English frame.

I will be glad to tell what I know about correcting this trouble on our roving frame. There are two or three reasons why this trouble occurs at times and one of them is probably lost motion in the lay train of gears; another one could be that there is not sufficient tension on the cone belt or probably the cone belt is slipping due to not having the proper grade of belt or width.

I have seen this trouble corrected by adding weight at the big end of the bottom cone. This results in more tension for the belt at the small end of the top cone where the slippage is most likely to occur. I believe CONTRIBUTOR No. 8533 stated that he had juggled the lay of the roving

Wood Sleeve Adapter for Small Beam Pins

This item was submitted in a kink contest.

EDITOR TEXTILE INDUSTRIES:

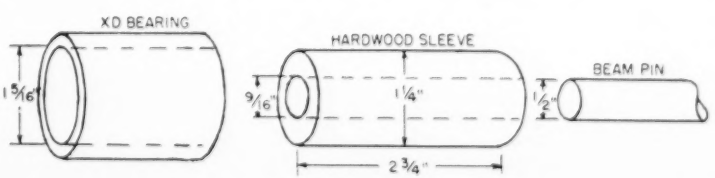
It is often necessary for us to use warp beams with small pins on our Draper XD looms. These looms are equipped with automatic let off and standard beam bearings. We buy beamed warps, and when weaving glass or worsted warps which do not require sizing the beam pins are small and will not fit our beam arbors which measure 1¼ inches.

For awhile we made steel sleeves to fit over pins the same outside diameter as regular Draper beam arbors. After the warp was run out, we had difficulty in getting these sleeves off, because the pins were slightly eccentric, bent, or nicked.

To solve the problem, we tried sleeves made of hardwood, and they worked well. We made a dozen wood sleeves, soaked them in oil overnight, and they have run for several months and slip on and off very easily.

On our slashers we also use several different kinds of beams which have different size pins. Steel sleeves gave us the same trouble on slasher beams, so we tried the wood sleeves in this instance and found that they worked equally as well as they did on loom beams. The wood sleeves (shown in accompanying sketch) have saved us considerable time and trouble.

CONTRIBUTOR No. 8555



"I'M NOT ONE TO SAY I TOLD YOU SO, BUT . . ."

SEYCO Products

WARP SIZING

- Softeners
- Binders
- Penetrants
- Ty-In Penetrants
- Shuttle Dressing

WET PROCESSING CHEMICALS AND AUXILIARIES

- Dye Assistants
- Penetrants
- Rewetting Agents
- Sanforized Fabric Oils
- Detergents
- Scouring Agents
- Softeners

NIAGARA TWIST-SETTER

- Yarn Conditioning Penetrants

Trying something new?

The SEYCO man is as close as your telephone. His help will cost you nothing, and his ideas, based on a half-century of broad slashing experience, may save you time and trouble.

Call your SEYCO man today.

HEADQUARTERS FOR TEXTILE CHEMICALS

SEYDEL-WOOLLEY & CO.

TEXTILE CHEMICALS

748 RICE STREET • ATLANTA, GA.

SEYCO

PENETRANTS • SIZING • SHUTTLE DRESSING • SOFTENERS • ALKALIS • TWIST SETTER MACHINES •

without correcting this trouble. In connection with the lay I suggest that he run a more or less open lay instead of having a pile up which would cause running over. Belt dressing should not be applied to the cone belt.

CONTRIBUTOR No. 8535

EDITOR TEXTILE INDUSTRIES:

CONTRIBUTOR No. 8533 presents a problem that perhaps most every carder in the business, with many years of experience, has been confronted with.

Quite a number of things may be wrong, and none of them may appear on the surface to be identified immediately. Oftentimes, the most apparent trouble can be found and adjustments made to correct the difficulty. Usually these apparent items have been caused by the obscure or remote details hidden from view.

A check list is worthwhile to follow and give a thorough examination to each roving frame. By eliminating each of these causes, CONTRIBUTOR No. 8533 should be able to overcome his difficulties. A proposed check list in brief is as follows:

(1) Frames not level, end to end, or front to back.

(2) Spindles or lifting rack slides not plumb.

(3) Bolster rail couplings loose, or bolster rail not level.

(4) Lifting gears loose on lifting shaft.

(5) Lifting gears set loose, or all in one pulling direction.

(6) Builder latches worn round; cut unsquare.

(7) Poker rod (bar) not level at center of build on bobbin.

(8) Builder latch studs tight in latch (too large or rusted). Builder latch studs wobbly in latches (too small or corroded).

(9) Adjustment screws controlling let off (tension too) not being equalized for movement of cone belt the same distance on top and bottom changes.

(10) Cracked sampsons at head end where lay motion is attached, as well as the two adjacent to the builder motion.

(11) Dowel pins loose or missing anywhere in the whole frame structure, particularly in lifting arm positions.

(12) Horsehead gearing with loose keys, worn keys, or worn gear studs.

(13) Change motion gears (reversing) having worn or loose keys, or wallowed out keyways in studs.

(14) Lost motion, or back-lash in lay gear train.

(15) Tension rack (for cone belt shipping) may have been broken and welded in improper position; welded area may not be dressed enough to allow freedom of movement, thus binding at some point. Matted and hardened waste at the bearing positions of the rack will aggravate this condition.

(16) Gears set too deeply, especially in lay motion.

(17) Running cut and molded gears in the same train, in lay, tension, or even in the compounds.

(18) Compounds, which control the lay or traverse motion, having badly worn gears or studs.

The foregoing check list may seem unreasonable; however, in twenty years of experience, I have found correction of these items necessary before overcoming the "over and under" problem on roving frames. The results are worth the effort, especially if other things are put into shape while doing the job. A system of preventive maintenance should be established to prevent further trouble with this problem.

Badly worn spindle tips are usually detected easily and should be reworked along with the flyers

The following comments are related to the numbered items in the check list:

(1) Frame leveling is a must at two-year intervals. When we had conventional frames, this was usually a check job annually, but with less dead weight on the floors now with long-draft, the frames do not sink as much as before. If the mill building has concrete floors or steel construction, leveling does not have to be done frequently. Felt pads are helpful on all kinds of floors.

(2) Spindle plumbing on roving frames is necessary to prevent binding. If the spindles are plumb, the carriage does not have to over-

Jig for Setting Worm Gears on C & K Looms

This item was submitted in a kink contest.

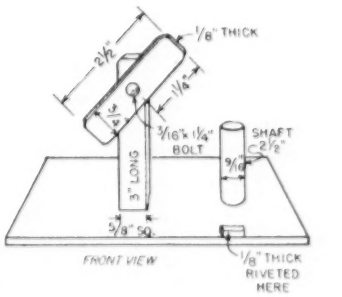
EDITOR TEXTILE INDUSTRIES:

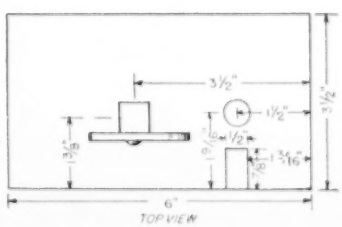
I made a handy jig for setting the worm gear on clutch assembly of C&K looms. The assembly includes box motions indicator No. 1397 and multiplier No. 1393.

When the worm gear No. L24138 on this assembly is broken, the entire assembly is usually replaced. The jig for replacing the worm gear may be made very economically. An accompanying sketch shows how the jig is made.

The clutch assembly is set on the jig so the slot in the clutch is on the upright. The pivoted arm is placed in contact with the worm gear; then the gear is drilled and keyed.

CONTRIBUTOR No. 8543





...with TYCOL lubricants on hand!

Cleaner because they cling! Tycol Amortac oils are tailored for mill operations with a special additive to impart positive "non-drip" characteristics. They'll lubricate looms, also top rolls on spinning, drawing and roving frames ... with no "throw off", no staining of finished threads! The Amortac series is just tacky enough to penetrate and cling to bearings – without splash – at peak roll speeds. With an added bonus: they'll minimize corrosion even in the most humid atmosphere! Request full information from your local Tide Water Associated office – today!

TYCOL
INDUSTRIAL LUBRICANTS

Boston • Charlotte, N. C. • Pittsburgh
Philadelphia • Chicago • Detroit
Tulsa • Cleveland • San Francisco
Toronto, Canada

TIDE WATER ASSOCIATED OIL COMPANY
17 BATTERY PLACE - NEW YORK 4, N.Y.

Over 300 Tycol industrial lubricants are at your disposal ... engineered to fit the job!

REFINERS AND MARKETERS OF VEEDOL ... THE WORLD'S MOST FAMOUS MOTOR OIL

come extra friction, and extra strain is not placed on the lay gears. Lifting rack slides, on the sampsons, mean that these in order to be plum must be just that. If the lifting rack slides are thrown in or out when the carriage is raised or lowered, tight spots may occur, thereby producing dwell at the change point. From the description given by CONTRIBUTOR No. 8533, this condition is indicated.

(3) Loose bolster rail couplings will cause the spindles to bind, and if these are not level, spindle binding and loose lifting arms are soon evident.

(4) Loose lifting gears permit a few gears to lift the load of the carriage.

(5) and (7) When lifting gears are set loose, and the carriage is leveled and templates set under the carriage for positioning the build, the lifting gears are not pulled tightly before the set screws are tightened. Template sticks or roving bobbins placed under the carriages should be just long enough to have the presser on the flyer to set midway the stroke (center) of the empty bobbin space to be filled. Of course a new flyer and presser should be kept for this purpose, and good spindles should be in place. The poker bar (rod) should be leveled, and then the lifting gear set screws tightened, staggered in position, one sampson with these gears snug against the lifting rack downward, and snug against top on the next sampson. By this means, the surges at the change are overcome, and the "over and under" problem is greatly reduced. This applies to both American and English type frames.

(6) Builder latches will wear as they grow older. Builder latches must be replaced or built up to avoid roundness and changes starting before the carriage has reached the change position. Otherwise a dwell results at both top and bottom, and the "over and under" problem will show up often. When cut properly, squared from the outside, this will help a lot. It is worthwhile to have the builder latches cut square on the milling machine if the latches are attached by a bolt through the stud-hole to a template.

(8) Tight studs in this position will demand all that the builder motion can exert to make the change. If breakage does not occur, the change is retarded and "over and under" traverses occur. Wobbly studs in latches permit the start of a change before the carriage reaches the proper position for the change.

(9) This is the tricky item on the English type frames. Both for the tension, as well as stroke. Tension gears are changed in two-teeth series to avoid having to adjust the screws, but many times the correct tension cannot be obtained without a single tooth change. Then a half-hour spent by the fixer to make sure this is done correctly is profitable. If these adjustments allow an eighth-inch movement of cone belt on top change, and one-fourth inch on the bottom change, then a ragged taper on the bobbin results, and

Old Model Drawing Frames Changed to Accommodate Long Staple Rayon

This item was submitted in a kink contest.

EDITOR TEXTILE INDUSTRIES:

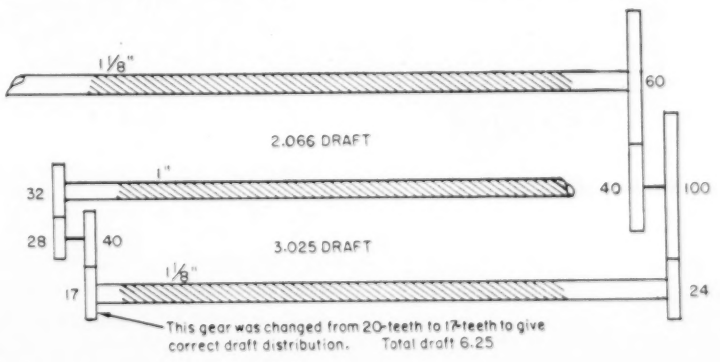
We were confronted with the problem of running some long-staple rayon on our old model drawing frames. Roll spread could not be adjusted sufficiently to accommodate the rayon staple. We used the following kink which gave good results without impairing quality.

First we removed the third drawing roll. This left only three rolls and gave ample space for the required roll settings. This change did not affect the total draft of the drafting zone, and our next problem was to establish the correct draft distribution among the three rolls. We did this by removing the off-end front roll 20-tooth gear and replacing it with a 17-tooth gear. This gave a draft of 2.066 between back and middle rolls and a draft of 3.025 between the middle and front rolls, thereby producing a total draft of 6.25.

Tests showed that the sliver produced on the three-roll drawing frame was equal in quality to sliver produced on four-roll frames of a different make which could accommodate the long staple rayon without removing a roll.

The accompanying sketch shows the gearing for the drafting rolls of the three-roll drawing frame.

CONTRIBUTOR No. 8545



NOW! A broader range of *Non-Congealing* warp sizes for spun rayon and blends

STA-GEL N.C. definitely improves loom efficiency!

New and Improved STA-GEL N.C. is made in a range of fluidities to meet specific concentration needs for the particular blend of yarn being sized.

STA-GEL gives you these important advantages:

- Smoother, Tougher Size
- Reduced Shedding
- Improved Loom Efficiency
- Easier Desizing
- More Strength and Binding Power
- Reduced Cost

Join the many important mills now using STA-GEL. Make your difficult constructions easier to weave with Staley's new, better sizing!

Investigate STA-GEL! Write today for all the facts about this superior sizing.

STA·GEL® N.C.

Staley's new high efficiency spun rayon size

A. E. Staley Mfg. Co., Decatur, Illinois

PRODUCTS FROM CORN
Staley's

the "over and under" problem is present.

(10) Cracked sampsons may foster almost any irregularity, and a good overseer will not resort to patching. The overseer should have the unit removed and welded, or a new piece should be installed to replace the faulty member. Patching sampsons with strap iron is an open invitation for trouble to visit you.

(11) The dowel pins have their place, and the machine just isn't all there if these are missing. Maintaining a lot of roving frames with dowel pins missing makes a hard job for the fixer. The cost is minute, but the insurance of well-kept roving frames with a supply of pins and reamers is worthwhile.

(12) and (13) Little need be said about horsehead gears and change motion gears to the experienced overseer or maintenance man. With such a condition of badly worn studs, loose or worn keys, or worn keyways, the machine can't do the job quality- or production-wise, and shows up throughout all subsequent processes.

(14) Lost motion in lay trains means badly shaped or irregularly laid rings of roving, and (16) will result in badly worn or broken gears and worn studs, which make themselves most evident by this running "over and under."

(15) This condition is explained in the first place.

(17) Economy of cost for the fine pitch gears is "penny wise and pound foolish." Cut gears are smoother running and needed here. Good quadrants for compounded gears, with full space for necessary movement, are most essential. Broken or cracked quadrants should be replaced with new ones. It is not worthwhile to weld these milled parts, unless a mill job is done on them before being put back on the roving frames.

(18) Annual inspection of compounds is most necessary. The sealed type (running in oil bath) can endure a longer period of time without dismantling for examination.

The use of a well managed oil can is most helpful. Don't expect a lad with three months' experience in the mill to take over the roving section, or the secondhand to be able to find these things if he is still damp behind the ears. The overseer will need a lot of helpful advice.

CONTRIBUTOR No. 8533 should do well in cutting his spindle speed from 950 to 800, regardless of what his production needs may demand. Quality should be improved along with the reduction of sliver weight from 55 grains per yard to 50 or 52 grains per yard. Overdrafting and excessive speeds demand a heavy toll when running long-draft roving.

CONTRIBUTOR No. 8536

EDITOR TEXTILE INDUSTRIES:

First of all, CONTRIBUTOR No. 8533 should make a thorough test on a Belger roving tester.

The fact that the run-under or run-over condition appears in a higher degree after the bobbins are ¾ full may point to a faulty cone speed ratio.

If the bottom cone speed is not exactly adjusted to the diameter of the empty bobbin, a faulty bobbin build should be expected. If the bobbin speed at the beginning of a doff is too high, the roving wound on the bobbin has a tendency to stretch. If the bobbin speed is too slow, a slack end condition appears for awhile. In both instances the cone gear should be changed.

The running conditions stated by CONTRIBUTOR No. 8533 are quite normal. 13½ to 14 layers per inch should be correct. If the changing of cone gear should not alter this condition, there is another trick which I have tried with success.

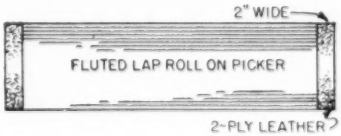
English type builders are tipped at each rail change by the "poker bar" with an attached stud that works in a slot cast into a bracket. The stud, situated on one end of this slot at empty doff, is gradually (at each rail change) moved to the other end of the slot during a doffing cycle. The sides of the slot are parallel. Remove the bracket and file the slot so the opening appears elliptical. Do not widen the starting position of slot but file down gradually toward the middle on both upper and underside of slot and from both ends toward middle. The deepest point in middle should be at least ⅛-inch wider than before; that is, ¼-inch wider from middle of top line to middle of bottom line of slot.

The elliptical shape of this slot will cause the stud (attached on poker bar) to hug this new curve at up-going and down-going of rail. This causes the bobbins to take on a convex taper which will help to stop run-unders or run-overs which are likely to occur on a concave taper of bobbin.

CONTRIBUTOR No. 8537

Prevent Excessive Wear on Ends of Fluted Lap Rolls

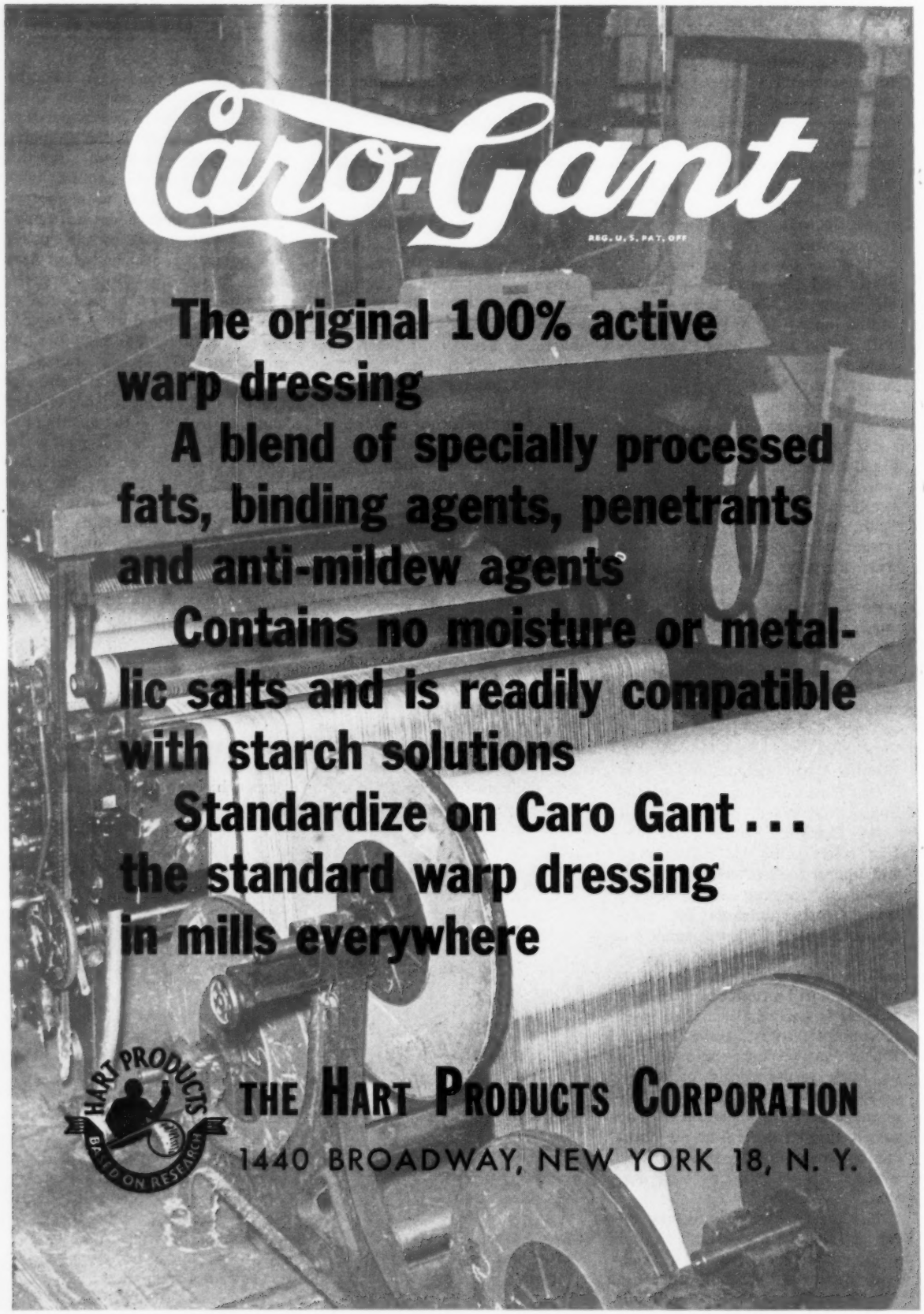
This item was submitted in a kink contest.



EDITOR TEXTILE INDUSTRIES:

After years of service and being thrown onto the two front lap rolls of a picker, the rolls get burred and worn on both ends. To eliminate the burrs and to make better selvages on the laps, take a 2-inch cut out of both *ends* down to the depth of a two-ply belt. Fasten to the rolls (with glue or brads) a 2-inch belt of two-ply. This will wear many years and helps make better selvages, thereby improving quality.

CONTRIBUTOR No. 8544


Caro-Gant
REG. U. S. PAT. OFF.
The original 100% active warp dressing
A blend of specially processed fats, binding agents, penetrants and anti-mildew agents
Contains no moisture or metallic salts and is readily compatible with starch solutions
Standardize on Caro Gant... the standard warp dressing in mills everywhere
HART PRODUCTS
BASED ON RESEARCH
THE HART PRODUCTS CORPORATION
1440 BROADWAY, NEW YORK 18, N. Y.

SUPPLIERS News

WHAT THEY ARE DOING

Allied Chemical & Dye Corp. has announced plans for construction of a $2,800,000 building at Buffalo, N. Y., as housing for the research and engineering staff of the National Aniline division. The new structure is expected to be ready for occupancy next spring. The Barrett division of the firm has acquired the Greensboro plant of Synvar Southern Corp. Barrett will continue to make the same grades of resins as have been supplied by Synvar to the furniture and textile industries, according to reports.

J. C. Fortune has been appointed sales manager of **American Bemberg,** and will continue as advertising manager. He succeeds H. G. Spitzer, recently resigned.

L. C. Perkinson was recently elected vice-president, and G. C. Walker, treasurer, of **American Cyanamid Co.** In the Calco Chemical division, Donald L. Griswold is being transferred on July 1 to the Bound Brook office as assistant to the manager of the dyestuff department. J. R. Burkett will take over Mr. Griswold's duties in Montreal. Calco has won the firm's "President's Award" for a record 6,985,294 man-hours worked without a lost time accident.

Earl Holt and Leroy Baines have joined the sales force of **Bryant Chemical Corp.** Mr. Holt, formerly with Burlington Mills, will represent

Mr. Holt

Mr. Barnes

the firm in North Carolina and Virginia. Mr. Baines' territory includes Maine, New Hampshire, and Vermont, as well as portions of northern Massachusetts. He was previously with Arms Textile Mfg. Corp.

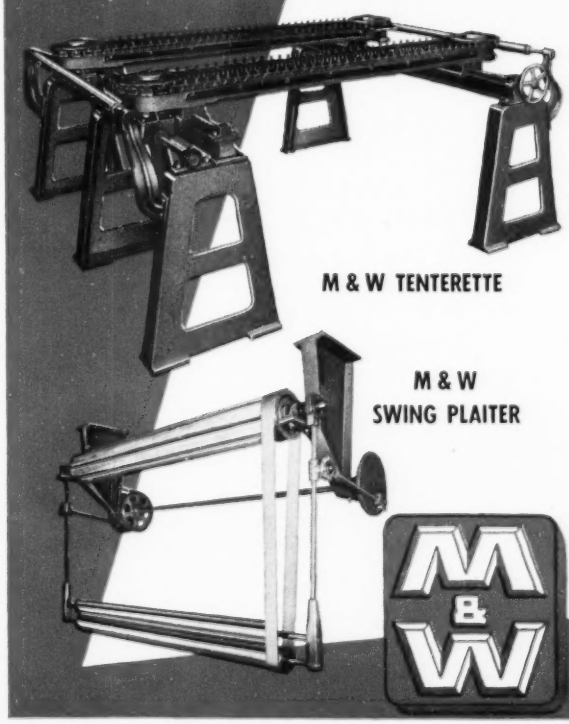
William W. Bowman is now head of the cotton division of **American Viscose Corp.'s** textile research department. He succeeds Harry E. New, who has been transferred to the Chemstrand Corp. at Decatur, Ala.

Ansul Chemical Co. has opened branch offices at 1110 White Street, Houston; 907½ Throckmorton St., Fort Worth; and in Tulsa. Virgil Murray is manager at Houston, Neal Engberg at Fort Worth, and Roger Allen at Tulsa.

John M. Reeves of Reeves Bros., Inc., has succeeded George M. Miller as vice-president of **The Association of Cotton Textile Merchants of New York.** All other officers were re-elected.

John D. MacNamara, formerly textile industry sales manager for

M&W News for Cloth Finishers . . .



Besides our High Speed Tenter Frame, our Positive Overfeed with Selvage Guider, and the most complete line of tenter clips, M & W can supply you with —

TENTERETTES: Short tenters (30", 80" and 100" long using our No. 12 tenter clip), built to any maximum width, with either straight or hinged rails. Serves many useful purposes. Made only by M & W.

SWING PLAITERS: Anti-friction bearings throughout. Designed for easy installation in any location in your plant.

LET-OFF STANDS: Movable, with casters, or fixed base, swiveling for easy cloth alignment.

BATCHERS: Constant tension or tensionless.

Write For Details Today

We can promptly supply full data on these specialized M & W devices — advise you how they can be of utility in your plant, filling long-felt needs that no other machinery satisfies. Ask for details without obligation.

MARSHALL and WILLIAMS CORPORATION
PROVIDENCE, R. I. • Greenville, S. C. • New York, N. Y.
EXPORT AGENT: Francis H. Leve & Son, 57 William Street, New York 5, N. Y.

Size with NU-FILM Your customers won't have trouble in dyeing, stabilizing, or crease-proofing your Greige goods because of incomplete size removal.

NU-FILM is a non-congealing warp size. It washes out of fabric with soap and water. Nothing else. And positively no enzymes! Quick, thorough rinsability. Less costly. Faster.

NU-FILM's better running properties increase weaving efficiency. NU-FILM cuts loom shedding. Minimizes formation of slubs. It reduces formation of "set marks" . . . does away with "hard size"—virtually eliminates rayon seconds.

Use it on spun rayon blends, cottons, and filament viscose yarns. Write for full information.

National
STARCH PRODUCTS

270 Madison Avenue, New York 16; Boston; Providence; Philadelphia; Atlanta; New Orleans, and other principal cities.

Minneapolis - Honeywell Regulator Co., has been appointed field sales manager for **Beckman Instruments, Inc.,** and will supervise the firm's field force.

The Bristol Co., Waterbury, Conn., has announced the appointment of Harry E. Beane as vice-president of sales. He has been with the organization since 1920.

Walter F. Woodward, head of the southern office, has been elected a director of **Curtis & Marble Machine Co.**

The Bullard Clark Co. is now sales agent for the **American Reed Co.,** Lawrence, Mass. Orders may be placed with either American Reed or the E. H. Jacobs Northern Division of Bullard Clark.

The industrial abrasive sales division of **The Carborundum Co.** has made the following personnel changes: Russell P. Colosi, assistant to the Cleveland district sales manager; Charles J. Walter succeeds Mr. Colosi as office manager of the Cleveland district. Wilfred Robson, office manager of the Los Angeles district sales office; and Joseph A. Marrone, assistant office manager at Chicago. In the coated products division, Herbert P. Dales has been appointed sales manager and Carl L. Adelman, assistant sales manager.

Merrill Watson has resigned as president of the **Carpet Institute** to become executive vice-president of the National Shoe Manufacturers Assn.

The Chemstrand Corp. has appointed Harry E. New resident technical sales representative, with head-

Mr. New

quarters at Decatur, Ala. Mr. New has been with American Viscose Corp. the past 14 years.

W. E. Coughlin has been appointed director of consumer services of the textile division of **Celanese Corp. of America.** Dr. Coughlin has been director of the textile laboratory of

SUPPLIERS News

Good Housekeeping magazine. E. J. Hansen has been made assistant sales manager of the New York district, textile division.

Clark Equipment Co. has regrouped its franchises into six instead of seven sales and service regions, with the North Central and West Central regions eliminated and a midwestern region formed, headed by Dan Stearns. Al G. Morrison, manager of the west central region, has been named a dealer, the dealership known as Morrison Industrial Equipment Co., with headquarters at 3015 S. Division St., Grand Rapids, Mich.

Von D. Oehmig has been made sales representative for the factoring division of **Crompton Richmond Co., Inc.** His territory is Georgia, Alabama, and Tennessee. Mr. Oehmig was formerly with Muscogee Manufacturing Co.

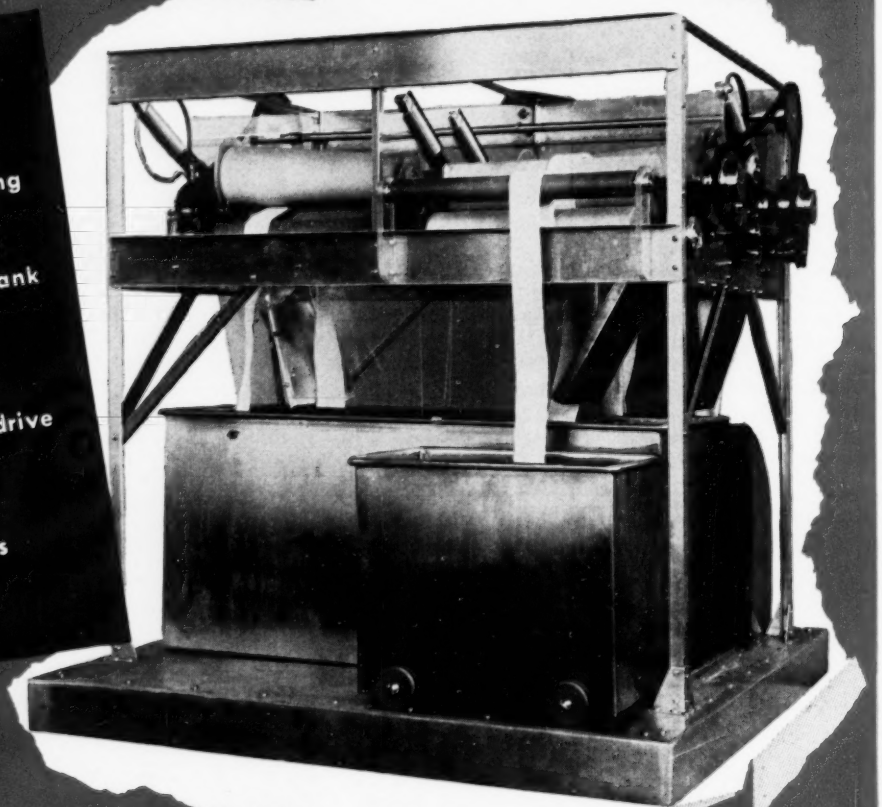
Two new vice-presidents were elected by **Crompton & Knowles Loom Works:** Harold R. Wing, also appointed general sales manager,

FAMOUS RINGS
THEY HELPED NAPOLEON . . . AND WERE GIVEN THIS RING
The six who helped the Little Corporal escape from Elba were given this ring as a memento.
INSTALL THESE RINGS throughout AND THEY WILL HELP YOU!
They'll help you escape from slow-break-in, frequent replacement, ragged performance . . . because they are engineered that way.
Ragan Rings
RAGAN RING COMPANY
The only manufacturers of Textile Rings in the South.
866 Murphy Avenue, P. O. Box 174 • Station A, Atlanta, Ga.
REPRESENTATIVES: John Faure, P. O. Box 574, Newton, N. C.
William S. Johnstone, P. O. Box 3213, Station A., Greenville, S. C.
Arthur Harris, H. B. "Booch" Askew, John Johnson, 413 Stonewall St., S. W., Atlanta, Ga.
William R. Fox, P. O. Box 360, Providence, R. I.

PROCTOR
CON-O-MATIC WASHER

offers these advantages

- Tension free operation
- Self-compensating rollers keep an even amount of fabric in each tank
- Less operator attention
- Simplicity of drive reduces maintenance
- Requires less floor space

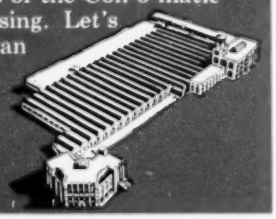


Scale Model—as shown at Knitting Arts Exhibition

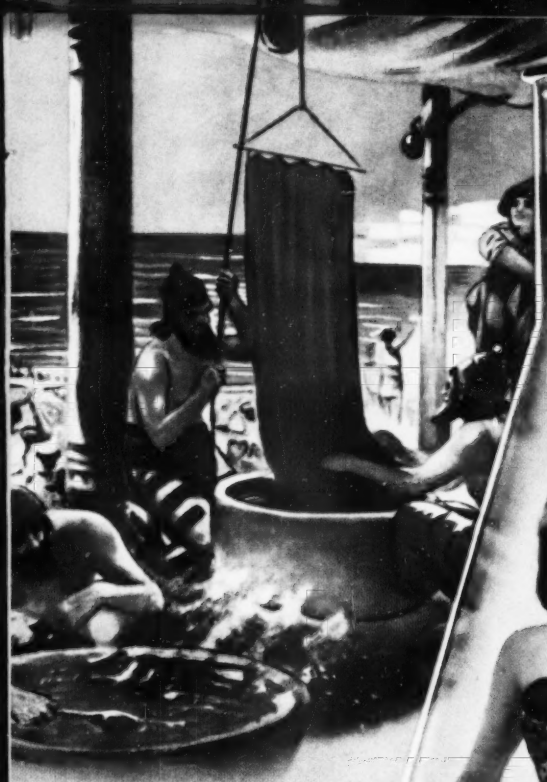
Proctor Con-o-matic washer combines simplicity of design with efficient operation and results in operating advantages impossible with conventional slack washers. Self-compensating rollers keep an even amount of fabric in each tank, without any effort or attention on the part of the operator. Through the use of tapered squeeze rolls (patent applied for), tanks are kept filled to the desired level automatically, thus insuring tension free operation.

Since synchronization is accomplished without elaborate drives, maintenance is drastically reduced.

Considered first as a washer, the basic principle used in the Proctor Con-o-matic makes it adaptable for use as a saturator, or in a dye process. It can be used wherever fabrics are to be processed in liquid. Proctor engineers are prepared to discuss procedures for determining other possible uses of the Con-o-matic washer for textile processing. Let's consider together how it can improve your operation.



PROCTOR & SCHWARTZ, INC. · 610 Tabor Road
Philadelphia 20, Pa.



Once it was **Tyrian Purple...**

Made by the Phoenicians at Tyre from a species of Mediterranean shellfish, Tyrian Purple set a standard of color quality that endured more than a thousand years. It was extremely expensive to manufacture and was held in such high esteem that often only personages of the highest rank were allowed to wear it.

CLASSIC COLORS for quality textiles

Now it is

*Amanthrene

(VAT) COLORS...

Today AMANTHRENE (Vat) Colors set a standard of fastness and quality recognized throughout the modern textile world. Years of use have proved AMANTHRENE (Vat) Colors unequaled for the printing of fine cottons and rayons as self colors or in combinations. Naturally they are well suited for dyeing the same fibres.

For working samples and complete information on the range of superior AMANTHRENE (Vat) Colors, consult our nearest branch. A.A.P. technicians will be happy to serve you at any time.

AAP

AMERICAN ANILINE PRODUCTS, INC.

50 Union Square, New York 3, N. Y.
Plant: Lock Haven, Pa.

Branches: Boston, Mass.
Providence, R. I. • Philadelphia, Pa.
Paterson, N. J. • Chicago, Ill.
Charlotte, N. C. • Chattanooga, Tenn.
Columbus, Ga. • Los Angeles, Cal.

Dominion Anilines & Chemicals, Ltd.
Toronto, Canada • Montreal, Canada

*Reg. U. S. Pat. Off.

SUPPLIERS News
WHAT THEY ARE DOING

and Oscar V. Payne. New directors are: Robert W. Stoddard, Wyman-Gordon Co.; Edward L. Clifford, Worcester County Trust Co.; Carl S. Forsythe, Forsythe & Fetzer; John C. Irvin, southern sales manager of C & K; and Oscar V. Payne.

Metro-Atlantic, Inc., and **Metro Dyestuff Corp.** have opened new southern headquarters at 1210 New Buncombe Road, Greenville, S. C., with Henry Papini in charge. The new branch will carry complete stocks of all ATCO products as well as Metro's dyestuffs and pigments.

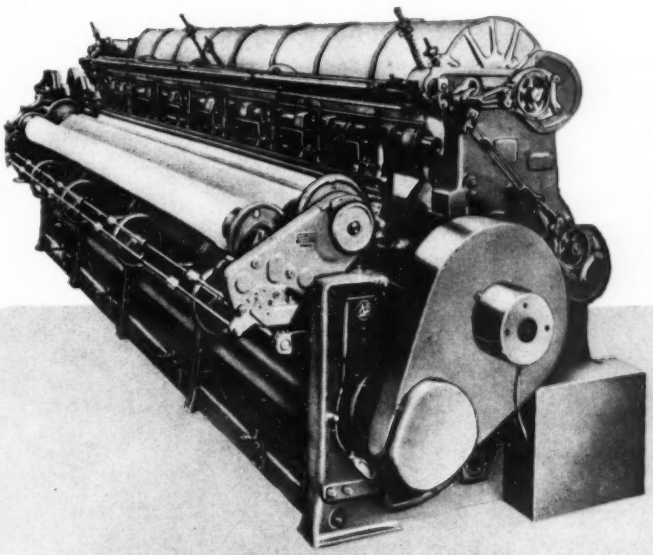
Mr. Lindsay
Mr. Valter

Mr. Carlson
Mr. Adair

Several additions to the firm's sales and service organization· E. R. Adair, who will assist Mr. Papini in technical service and sales throughout the South; Charles M. Lindsay, Jr., formerly with Lane Cotton Mills Co., whose territory is Alabama, Georgia, Tennessee, Mississippi, and Louisiana; and John J. Valter, previously with the rayon division of Riegel Textile Corp., who will represent the firm in North Carolina and Virginia. All will have their headquarters in the company's Greenville office. Robert H. Carlson will represent the organization in parts of New England. Dr. Harry W. Grimmel has been elected president of **Metro Dyestuff Corp.** John J. Fantry has joined that firm as chemist in charge of the textile pigments department.

Diamond Alkali Organic Chemicals Division, Inc., is the new name for

TOP PERFORMANCE *with* BIJUR



The outstanding Reiner RT-6 Tricot Knitting Machine features lighter knitting elements, smoother motions, improved guide bar action, and higher speeds for maximum production.

Reiner standardizes on Bijur Automatic Lubrication for the correct oiling of 120 bearings on the RT-6 to assure smooth, high-speed operation, eliminate down time for oiling, and cut maintenance costs to the bone.

Specify Bijur on all new equipment you buy and gain *higher production, longer machine life,* and *lower maintenance.* A Bijur engineer can solve your lubricating problems on all machines now in production or in the planning stage.

300 N-7

BIJUR
LUBRICATING CORPORATION
Rochelle Park • New Jersey
Pioneers in Automatic Lubrication

For further information use Handy Return Card, Page 206

SUPPLIERS News — WHAT THEY ARE DOING

Kolker Chemical Works, Inc., subsidiary of **Diamond Alkali Co.**

Warren D. Oliver, of the firm of Herrick, Smith, Donald, Farley, and Ketchum, has been elected to the board of directors of **Draper Corp.** The merit award offered by the Associated Industries of Massachusetts for financial reports to employees was won recently by Draper. The aim of the contest is to encourage the use of these reports as an effective means of improving employer-employee relations.

Eldean-Bugli-Chesrown, Inc., with offices at 670 Fifth Avenue, New York City, and headed by Fred Eldean, has been formed to provide the following services: finding or developing new products or markets; merchandising and sales promotion; sales development; public relations; introduction of new products; coordination of national and local merchandising; programs involving interindustry competition; and creation of special events and dramatizations.

The first of six production units at the **Du Pont Co.'s** $40,000,000 plant at Kinston, N. C., has gone into operation. The initial unit is producing "Dacron" in staple and tow forms. The five additional units are expected to be in operation by the end of the year.

George H. Elliott & Co., New York, management consultants, now have a controlling interest in Leetham, Simpson Limited of Montreal and Toronto, Canada.

Emmons Loom Harness Co. was recently designated a distributor of "Dandux" canvas baskets, hampers, trucks, and other products.

Luther P. Corley has replaced W. B. Meredith as textile sales engineer for **Engineered Plastics, Inc.,** Gibsonville, N. C.

Lawrence Katz, chairman of the board, has assumed active leadership of the **Fidelity Machine Co., Inc.** In addition to his duties as general manager, president Joseph P. Vogt is now in charge of all new product development and engineering. Roy Faigenbaum, vice-president for sales, heads the market development division; and Robert Scholes, vice-president in charge of engineering and production, has complete supervision of the plant.

Wallace A. Gray has joined the New York sales staff of the **Girdler Corp.'s** Votator division.

Charles T. White, Jr., has been appointed Pittsburgh district manager, industrial products division, **Goodyear Tire and Rubber Co.**

Hemphill Co. now has new southern division quarters at 2011 English St., High Point, N. C. The new building includes a machine demonstration department for the training of hosiery mill technicians who are responsible for the operation of the firm's Banner machines. James McDowell continues to direct operations as vice-president in charge of southern sales.

Harry W. Bryson, Jr., is now sales service representative of **Hooker Electrochemical Co.** at Tacoma, Wash. His territory includes the Pacific Northwest, British Columbia, and Alaska.

Richard Kinder, with the firm since 1949, has been appointed na-

CROMPTON RICHMOND COMPANY INCORPORATED FACTORS

The Human Factor

A Steady Flow Of Cash When You Need It Most

When you are Factored By Crompton, you are assured an uninterrupted flow of cash for your receivables . . . daily or weekly—or on any other reasonable basis best suited to your needs.

When you are Factored By Crompton, you are protected by its financial strength and great experience in the South.

We are specialists in releasing working capital tied up in receivables. Ours is an economical arrangement for you, because we enable you to turn over your capital more often – and never be short of cash as long as you ship. Remember, the lack of money for any emergency is a very costly affair.

Representatives:
L. N. HUFFSTETLER, Box 605, Gastonia, N. C. • VON D. OEHMIG, Green Island Hills, Columbus, Ga.

CROMPTON-RICHMOND CO., INC.
1071 Avenue of the Americas, New York 18, N. Y.

tional account representative for **Hyster Co.** His headquarters are in the company's Chicago offices.

Formerly president of Powdrell & Alexander, Inc., Brainard T. Webb has joined **William Iselin & Co., Inc.,** in an executive capacity.

W. Jack Simpson has severed his connection with **Jenkins Metal Shop** and has purchased the interest of R. B. Jenkins in the **Jenkins Reneedling Co., Inc.** In turn, enough of the stock has been sold to George W. Rhyne to give each of them 50% of all outstanding stock in the company.

Thomas J. Scanlon, formerly with the Calco Chemical division of American Cyanamid Co., has joined

Mr. Scanlon

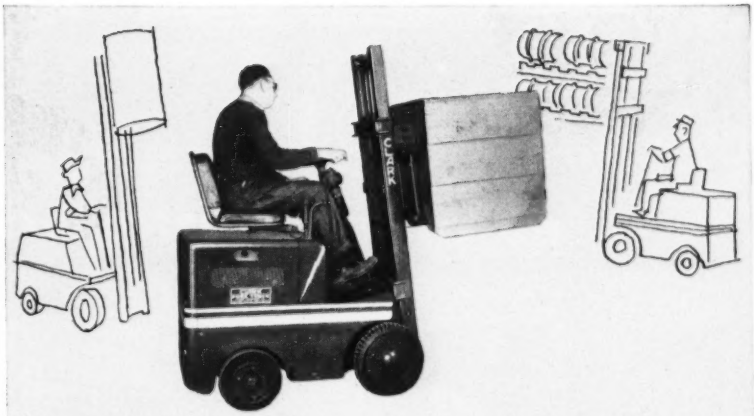
the sales staff of **Dexter Chemical Corp.** He will handle the sale of textile chemicals in the Philadelphia area, southern New Jersey, and parts of Pennsylvania.

W. M. Hite, general sales manager for **Johnson Motor Lines, Inc.,** was recently honored by the American Trucking Associations, Inc., for his activities in the drive for new memberships in the Customer Relations Council. The Council's purpose is to develop techniques and methods to provide better customer relations throughout the industry. Membership is made up of owners, sales managers, and salesmen of motor carriers throughout the nation.

Frederick T. Marston was recently elected president of **Kaumagraph Co.** He replaces Thomas H. Miller, now chairman of the board. Bryant P. Lindley succeeds Mr. Marston as secretary.

H. Bruce Rasmussen, previously with Baker Chemical Co., is now sales manager in charge of the coast-to-coast sales organization of **Miller Motor Co.** New factory salesmen are: Jack Frink and John Vass, working in the Chicago area; Stephen Stiles, Detroit area; and Roger Lawson, Cleveland-Akron-Youngstown area.

Richard N. Mathews has been



WHICH POWER TYPE IS BEST FOR YOU?

...electric, gas, diesel or L.P. gas?

No two jobs are exactly alike, so there's no such thing as one "best" power type. Which type is best *for you*?—that's the important question. The only person who can give a really *unbiased* answer is one who knows them all, and knows where they fit.

That's your local CLARK Dealer. He carries electric, gas, diesel and L. P. gas units—and he's got no ax to grind for any one. His object is to provide the one that's best for you. For example, careful application analysis often proves that *electric* trucks are best for certain jobs because of these advantages:

- ★ **Economical operation on low-cost electric power**
- ★ **Long life, less maintenance—electrics have fewer, simpler moving parts**
- ★ **Smooth, vibration-free handling of fragile loads, less wear on truck**
- ★ **Quiet, clean operation**

Which power type is right for you? No matter what it is, you'll find it in the CLARK line of quality handling equipment. You'll always be right when you buy from CLARK.

1903 1953 FIRST FIFTY YEARS CLARK EQUIPMENT

WHEN THE ANSWER IS *Electric* CLARK ELECTRICS ARE THE ANSWER
...Here's why:

1 Better battery efficiency—users report *more work* per amp-hour with CLARK.

2 Greater stability—safer for load, safer for operator.

3 Faster acceleration, greater speed—gets more work done, covers more ground.

4 Safer, smoother stops—with CLARK's positive-controlled, reverse torque braking.

5 "Application-engineered"—for special requirements, CLARK provides custom engineering.

CLARK ELECTRIC, GAS, DIESEL, L.P. GAS **FORK TRUCKS**
AND POWERED HAND TRUCKS • INDUSTRIAL TOWING TRACTORS

INDUSTRIAL TRUCK DIVISION • CLARK EQUIPMENT COMPANY • BATTLE CREEK 61, MICHIGAN

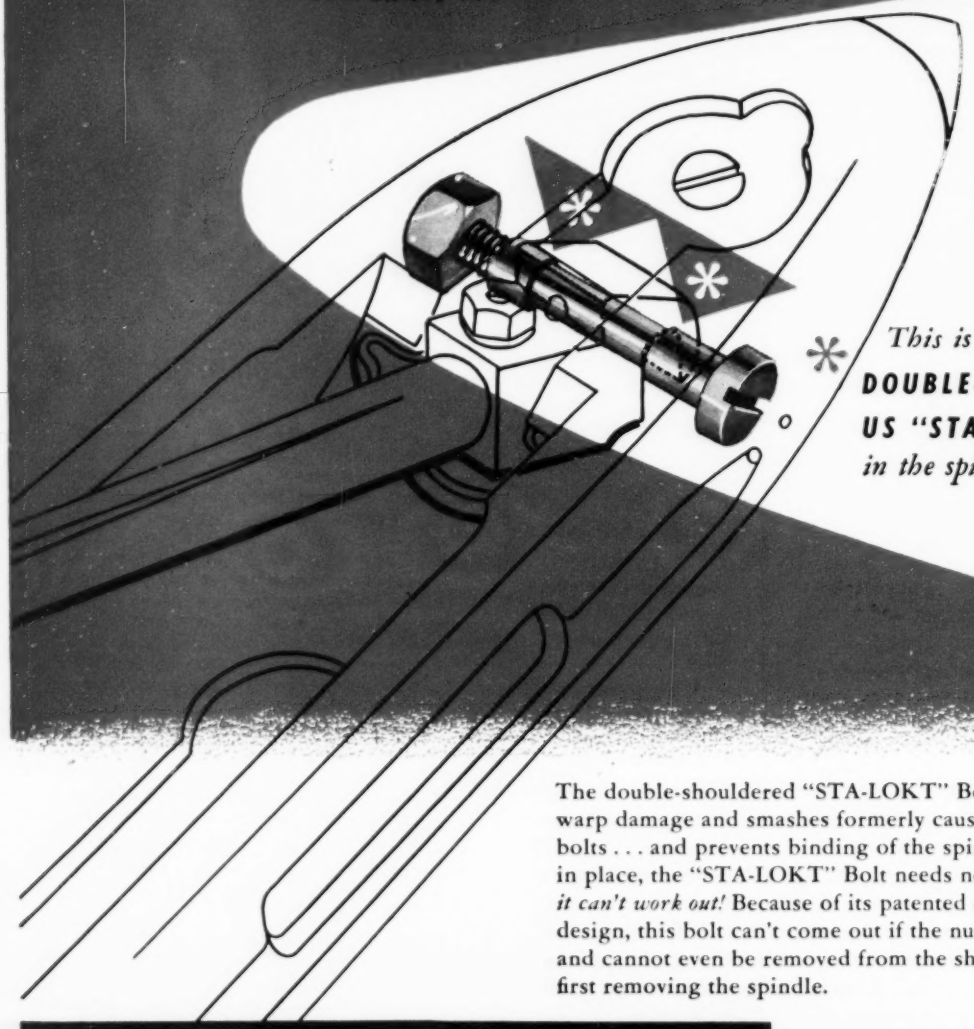
Please send: ☐ Condensed Catalog ☐ Driver Training Movie
☐ Have Representative Call

Name _____
Firm Name _____
Street _____
City _____ Zone _____ State _____

AUTHORIZED CLARK INDUSTRIAL TRUCK PARTS AND SERVICE STATIONS IN STRATEGIC LOCATIONS

It's US patented

so no other shuttle has it!



* *This is the new* **DOUBLE-SHOULDERED US "STA-LOKT" BOLT** *in the spindle assembly*

The double-shouldered "STA-LOKT" Bolt eliminates warp damage and smashes formerly caused by loose bolts . . . and prevents binding of the spindle. Once in place, the "STA-LOKT" Bolt needs no tightening — *it can't work out!* Because of its patented double-shouldered design, this bolt can't come out if the nut gets loose — and cannot even be removed from the shuttle without first removing the spindle.

U S BOBBIN & SHUTTLE CO.

Can be used on any spindle assembly featuring the R-B head type spindle.

Manufacturing Plants

LAWRENCE, MASS. • GREENVILLE, S. C. • KEENE, N. H.

General Sales Office LAWRENCE, MASS.

Southern Division Headquarters So. Carolina National Bank Bldg., GREENVILLE, S. C.

CHARLOTTE, N. C. JOHNSON CITY, TENN. FORT MILL, S. C. LaGRANGE, GA.
PHILADELPHIA, PA. PROVIDENCE, R. I. MINNEAPOLIS, MINN.

DALLAS: O. T. Daniel, Textile Supply Co. LOS ANGELES: E. G. Paules, 1762 W. Vernon Ave.
CANADA: W. J. Westaway, Montreal, Que., Hamilton, Ont.

SUPPLIERS News — WHAT THEY ARE DOING

elected vice-president of the recently formed firm of **Kewanee-Ross of Canada Limited,** and is in charge of the company's general offices at 57 Bloor Street West, Toronto. The new company is a division of **American Radiator & Standard Sanitary Corp.** and affiliated with Kewanee-Ross Corp. of Kewanee, Ill., and Buffalo, N. Y.

Royston Crewdson has been appointed representative of **The Kuljian Corp.** in the Far East, with headquarters in Tokyo. He was formerly with the American Administration in Japan.

Pittsburgh Coke & Chemical Co.'s fine chemicals division has opened a sales office at 29 Bala Avenue, Bala-Cynwyd, Pa., to serve the Philadelphia territory. Sales supervisor is

Mr. Neeb

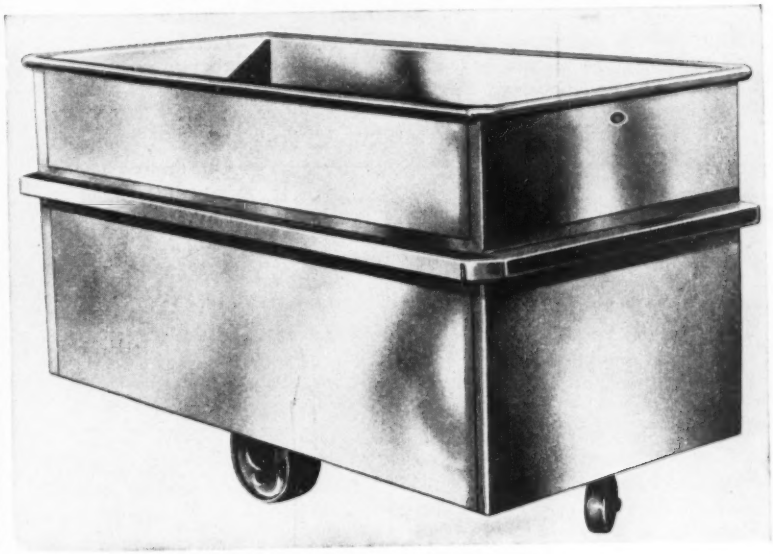
Boyce C. Bond, and William O. Neeb, formerly with Althouse Chemical Co., Inc., has joined the division as salesman in Delaware, Maryland, most of Virginia, part of New Jersey, and eastern Pennsylvania.

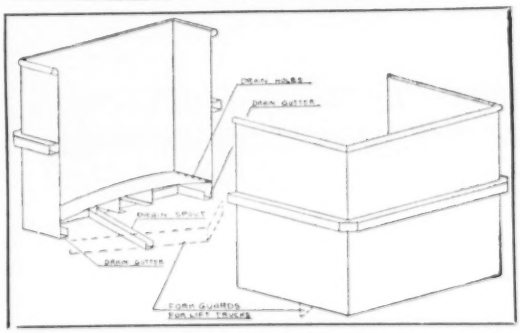
The following officers were recently elected at **Montgomery & Crawford Co., Inc.:** Ola E. Fee, president; W. P. Thomas, first vice-president and controller; Nolan H. Penland, Sr., secretary and treasurer; W. M. Walker, vice-president. Henry T. Bourne, former president, was elected chairman of the board.

Multi-Clean Products, Inc., St. Paul, Minn., has completed negotiations for the purchase of the manufacturing facilities of General Electric Co.'s industrial vacuum cleaner department. A new factory is under construction in St. Paul for production of the cleaners.

National Starch Products, Inc., recently opened a new research laboratory at Plainfield, N. J., as the latest step in the firm's two million

GLASCO *Stainless Steel*
DYE HOUSE TRUCK
with Controlled Drainage





Curved bottom drains liquids to sides.

Gutters at sides lead liquids to drainage ducts at either end and discharge toward bottom center of the truck.

For better handling of cloth and more healthful conditions, efficient dyers are using a new type GLASCO Stainless Steel Truck that drains continuously toward the center of the truck.

Effects of this dual drainage are:

1) Truck handlers can stand close to the truck when loading without having water drip on their feet.
2) Goods are *laid* in the truck, not tossed at arm's length.
3) Health conditions are greatly improved.

With the addition of simple guards, drain truck may be rapidly transported by fork lift trucks.

Send for full details.

Manufacturers of modern, custom built metal equipment for wet processing uses, including Dye Jig Enclosures, Dye Tubs and Becks, Wash Tubs, etc., of stainless steel and other metals that resist corrosion under most alkali and acid conditions.

GLASCO EQUIPMENT CORP.

Pioneer Fabricators of Stainless Steel Equipment

10 WAIT STREET — GLASCO PRODUCTS — **PATERSON 4, N. J.**

Phila. Area:
Marple Organization
1200 Commercial Trust Bldg.
Philadelphia 2, Pa.

New York State:
Sanders Industrial Equip. Co.
1351 Broadway
Albany 4, N. Y.

South: **Henry H. Hersey Co., 44 Norwood Place, Greenville, So. Car.**
New England: **Harris & Underhill, 446 Statler Bldg., Boston, Mass.**

SUPPLIERS News — WHAT THEY ARE DOING

dollar resin expansion program. The plant was named for Alexander Alexander, founder of the company.

Nuodex Products Co., Inc., has moved its sales, executive, and administrative offices from Elizabeth, N. J., to new quarters at 1 Virginia St., Newark. The mailing address remains the same, however. Advertising, accounting, and purchasing personnel have been transferred to Newark.

George M. Hand of Reading, Pa., has been made exclusive representative for the **Page-Madden Co., Inc.** in Pennsylvania, Delaware, Maryland, and southern New Jersey. Maurice A. Murray has been appointed to the engineering staff. He was formerly with the American Lava Corp.

Myron T. Fleming, formerly vice-president in charge of sales and engineering, has been made head of the dryer division of **Proctor & Schwartz, Inc.** He replaces A. O. Hurxthal, who has retired from active service.

Reichhold Chemicals, Inc., has set up a manufacturing division at Ballardvale, Mass., to produce its line of synthetic resins and basic industrial chemicals used by the region's textile, paper, and plastic industries.

Mathieson Chemical Corp. and **American Enka Corp.** have announced plans for a new plant to be built at Morgantown, W. Va., to produce caprolactam, a raw material to be used in the production of nylon fiber.

William M. Baker was recently elected treasurer of **The Merrow Machine Co.** He has been with the company since 1935.

J. A. Robinson has been made field sales manager for the industrial division of **Minneapolis-Honeywell Regulator Co.** He replaces O. B. Wilson, now sales manager of industrial instruments. Devon W. Fryback is now sales manager of the Eastern region for the Industrial division; O. B. Pyle, Jr., is industrial manager of the Mid-Atlantic area; and Edward J. Klein is industrial manager for the firm's Philadelphia branch office.

Earle E. West was recently elected president and director of **Redman Process American Corp.** Raymond H. Styles is vice-president. Frank R. Redman, inventor of the Redman process, will be actively associated with the enterprise as consultant, and a substantial interest in the corporation has been acquired by Proctor & Schwartz, Inc., which builds the machinery for the process.

One of the longest and largest tank trucks legally permitted is being used by **Reichhold Chemicals, Inc.,** to deliver liquid synthetic resins produced at its Charlotte, N. C., plant to its customers in the textile, plywood, and furniture industries of the Carolinas and Virginia. Compartmented into three 1000-gal sections, the custom-built tank truck can be loaded up with 30,000 lb of various resin glues for several stop-off deliveries without reloading.

The **Reliance Electric & Engineering Co.** has transferred Dale D. Drollinger from its Cincinnati staff to be branch manager at Rockford, Ill. He is replaced in Cincinnati by Daniel J. Donnelly of the Philadelphia office. John M. Duff is with the sales

Material: Caustic solution—for use in mercerizing machines.
Problem: Rotary pumps wore quickly, lost capacity, and had too little suction.
Solution: Moyno pumps cut maintenance and repairs to minimum—had ample suction for drawing caustic through the cloth.

Material: Textile Starch Sizing.
Problem: Other positive displacement pumps broke down starch; needed frequent maintenance.
Solution: Moyno pumps starch at 25 p.s.i. with no churning or turbulence. Pump maintenance has been reduced to minimum.

Material: Size—china clay and latex.
Problem: Centrifugal pump unable to handle viscosity—causing frequent trouble.
Solution: Moyno pump has been on duty for a year. Pump trouble completely eliminated; no repairs.

Material: Chromic Acid.
Problem: Material hard on pumps—being slightly corrosive and abrasive.
Solution: Moyno pump on duty for the past two years; has required practically no maintenance. Customer very well pleased.

Four Textile Production Problems Solved By The MOYNO PUMP!

Features of the MOYNO that may solve YOUR pumping problem

Positive Displacement — Moynos pull up to 29" vacuum while discharging under pressure. Big Moynos deliver up to 250 g.p.m. at pressures to 600 p.s.i.

Gentle — No churning; won't break up semi-solids; won't aerate liquids.

Reversible — pumps with equal efficiency in either direction.

Versatile — handles liquids, slurries, pastes—even potato salad! Rotor and stator available in stainless steel, other alloys, or plastics to meet wide variety of applications.

Trouble-Free — self priming; won't cavitate or vapor-lock. Just one moving part—no valves to stick, no pistons to gum up. Built for tough service. Easy to maintain.

ROBBINS & MYERS • Inc.
SPRINGFIELD 99, OHIO • BRANTFORD, ONT.

Looking for a pump with a fast-growing reputation for solving tough problems? Take a look at the simple, versatile Moyno!

Briefly described above are a few of the many successful case histories proving how Moynos handle jobs where other pumps failed. Why is the Moyno a "problem-solving" pump? For one thing, because it differs completely from conventional pumps—rotary, centrifugal or piston. Just one rugged moving part—a rotor turning within a stator—does the job.

If *you* have a pumping problem caused by abrasive or corrosive materials—watery, viscous or even semi-solid—find out if the Moyno can help you! Mail the coupon.

Robbins & Myers, Inc. TI-53
Pump Division, Springfield 99, Ohio
Gentlemen: Please mail free copy of Bulletin 30-B containing details on construction and operation of Moyno Pumps:
*Name*_____ *Title*_____
*Company*_____
*Address*_____
*City*_____ *State*_____

application engineering staff at Boston; and George P. Loomis, Jr., is located in Syracuse.

Engineering Research Associates of St. Paul, Minn., is now a division of **Remington Rand Inc.,** which acquired the firm last year as a subsidiary. A special sales department, headed by John E. Parker, former president of Engineering Research, has been set up to handle sales of electronic computer equipment.

Henry P. Goodwin has been appointed southern district sales manager of **Steel Heddle Manufacturing Co.,** with headquarters in Greensboro, N. C. Dan M. Culp, formerly with the Southern Shuttles division

Mr. Goodwin (above left)

Mr. Culp (above right)

Mr. Breen (right)

in Greenville, S. C., is now located in Greensboro and representing both Southern Shuttles products and Steel Heddle's line of loom harness equipment. Albert R. Breen will represent the company in Minnesota, Iowa, Wisconsin, Illinois, Michigan, Indiana, Ohio, Mississippi, and Louisville, Ky. His headquarters are at 80 East Jackson Blvd., Chicago.

The **Standard Pressed Steel Co.** has opened a warehouse at 815 North Sepulveda Blvd., El Segundo, California, to service the firm's Pacific Coast sales territory.

The Stanley Works have appointed Charles K. Nichols sales manager of the Magic Door division. He was sales promotion manager of this division since 1952, before that being associated with the Reflectal Corp., now a division of Borg-Warner Corp.

William Pearson is now technical service representative in the Georgia, Tennessee, and Alabama terri-

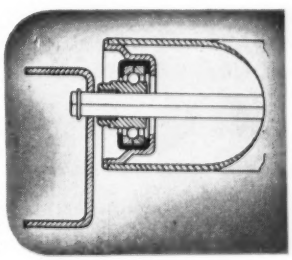
SHIPPED TO YOU

FROM STOCK

What are your current needs in roller conveyor? Logan Stock Roller Conveyor is offered in several sizes for average duty conveying. Roller spacing 4" or 6" centers. Roller lengths of 12", 16" and 20". Capacity 75 lbs. per ft. with supports on 10'0" centers and 380 lbs. per foot with supports on 5'0" centers. Both stationary and portable supports available. USE THE COUPON for further information.

FEATURES

ROLLER—2¼" O.D. No. 16 Ga. Welded Steel Tubing. Pressed Steel cup secured to tubing. Cap. 150 lbs.
SHAFT—7/16" Hexagon Cold Rolled Steel. Positively locked against rotation by hexagon holes in frame.
BEARING—No. 50. Slip fit in cup, easily removed and replaced. Protected position—set back from end of roll.
FRAME—3½" x 1¼" x 10 Ga. Pressed Steel Channel. With four 1-5/16" O.D. 13 Ga. Welded Tubing ties per 10'-0" section. Capacity 75 lbs. per foot with supports on 10'-0" centers and 380 lbs. per foot with supports on 5'-0" centers.
COUPLING—Furnished with bolted type for stationary service. Can furnish hook type for portable service if preferred.



DETAIL OF ROLLER

ALSO Stock WHEEL CONVEYORS
In both straight and curved sections. Ideal for portable use. Light-to-medium duty. Write for details.

Check your needs today!

Logan Co., Louisville, Ky.

☐ Send literature on Stock Conveyors

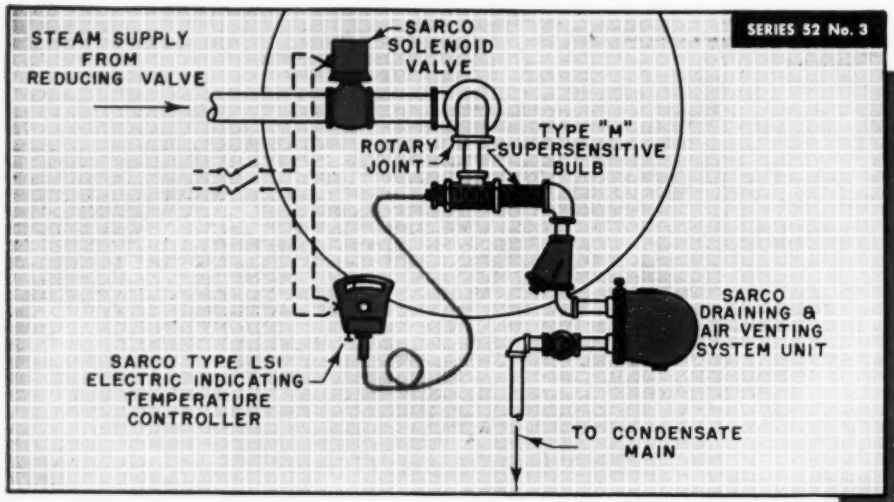
Mr. _____

Firm _____

Address _____

Logan CONVEYORS
LOGAN CO., 206 CABEL ST.
LOUISVILLE, KENTUCKY

This sketch shows temperature control applied to a Sarco Draining System for drying cylinders. The Sarco System assures rapid and continuous removal of condensate. The steam supply is controlled in accordance with load requirements.


SERIES 52 No. 3
STEAM SUPPLY FROM REDUCING VALVE
SARCO SOLENOID VALVE
ROTARY JOINT
TYPE "M" SUPERSENSITIVE BULB
SARCO DRAINING & AIR VENTING SYSTEM UNIT
SARCO TYPE LSI ELECTRIC INDICATING TEMPERATURE CONTROLLER
TO CONDENSATE MAIN

more production

from DRYING CYLINDERS and ROTARY DRYERS

IF YOUR DRYING OPERATIONS include steam heated drying cylinders or rotary dryers, this story is of vital interest to you!

More than one hundred actual installations made in the last two years in the textile, chemical and paper industries have demonstrated that:

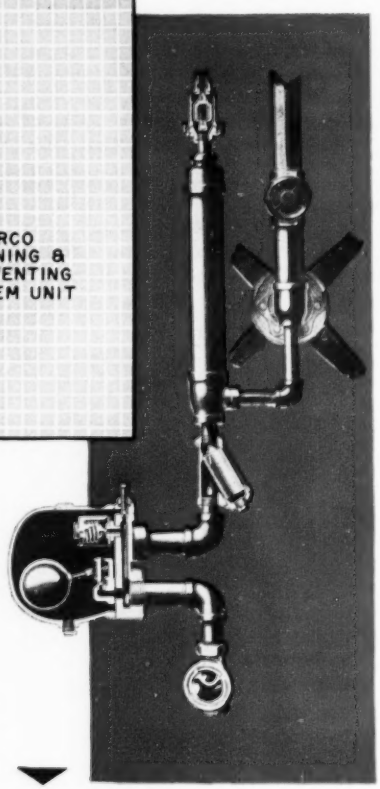
1. *Warming-up time can be cut 10-25%*
2. *Production can be increased 15% or more*
3. *Considerable steam can be saved at the same time by installing the*

Sarco Draining and Air Venting System

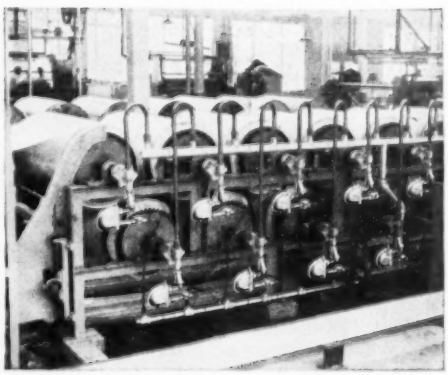
This System has finally solved the vexing problem of traps locked by steam in the syphon pipes and discharge joints from the cylinder to the steam trap.

Continuous discharge of condensate as fast as formed, plus very rapid purging of air assure more evenly heated drying surfaces—with less steam consumption.

Write for the Technical Bulletins for your industry.



The standard Sarco Draining and Air Venting System consists of a special float-thermostatic steam trap equipped with *steam lock release* and thermostatic air vent; an air collector pipe with an air vent on top; a strainer and a flow indicator.



Special Sarco Float-Thermostatic Steam Traps equipped with *steam lock release* and sight glass as used on drying cylinders and rotary dryers in the textile, chemical and paper industries.

SARCO COMPANY, INC.
Empire State Bldg., New York 1, N. Y.
REPRESENTED IN PRINCIPAL CITIES
Sarco Canada Ltd., Toronto 8, Ont.

SARCO SERVES STEAM
improves product quality and output

401

SUPPLIERS News
WHAT THEY ARE DOING

tory for the Warwick Chemical Co., division of **Sun Chemical Corp.** Prior to joining Warwick, Mr. Pearson was with Crystal Springs Bleachery.

T. M. McNeill has joined **Texize Chemicals, Inc.,** Greenville, S. C., as a consultant to the firm's textile clients. His services will include on-the-spot analysis of plant problems and recommended solutions.

J. W. Shaver has been made president of **The Spool Cotton Co.,** distributors of J. & P. Coats and Clark's threads, Chadwick's yarns, and Crown zippers. He succeeds Frank B. Hutton, retired.

Ronald R. Menti was recently elected president, and Howard F. Jonson, vice-president of **Rossville Dyestuff Corp.**

Marvin L. Huckabee has joined the **A. E. Staley Manufacturing Co.** as a research chemist in the textile section of the research department. He was formerly with Arnold, Hoffman & Co., Inc.

Richard W. Bissonnette has been elected president of **Standard Card Clothing Co.** He succeeds his father, the late Victor J. Bissonnette. John M. Patten is now secretary.

Supreme Knitting Machine Co., Inc., has opened new general offices at 94-02 104th Street, Ozone Park 16, Queens, N. Y.

A new building, providing approximately 10,000 sq ft floor space, has been acquired by **Textile Machine Works** in Asheboro, N. C., for its full-fashioned knitting machine reconditioning branch. Earl Zettlemoyer has been appointed superintendent of the Asheboro branch.

H. D. Hughes was appointed general sales manager and E. E. Fogle, sales manager, of the industrial chemicals division, Carbide and Carbon Chemicals Co., a division of **Union Carbide and Carbon Corp.** Both men have been with the firm for a number of years.

Eight employees of **Watson-Williams Manufacturing Co.** recently received 25-year awards of wrist watches and certificates for a quarter century of service. Fifteen-year awards and gifts of cash were presented to two other employees.

ON A FIDELITY MULTI-DESIGN RIBBER

120 VERTICAL COLORS—5 HORIZONTAL COLORS

The Fidelity Multi-Design Ribber makes possible a wide range of plating designs and color combinations in True Ribbed Fabric—diameters up to seven inches.

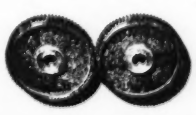
Fidelity Machines are available in 10-step and 25-step types. For more information, write today for detailed literature on the Fidelity Multi-Design Ribbers.

When you are in the Philadelphia area, visit the new showroom at our plant—see The Multi-Design Ribber in operation.

Designers and Builders of Intricate, Automatic Precision Machines

FIDELITY MACHINE COMPANY, INC.

SINCE 1911

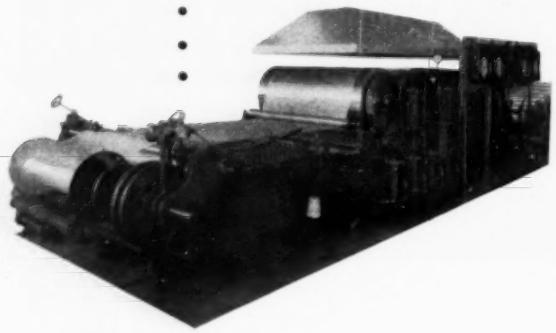


3908-18 FRANKFORD AVENUE, PHILADELPHIA 24, PA.

For further information use Handy Return Card, Page 206

Leading Cotton Mill Replaces

3 COTTON SLASHERS WITH 1 JOHNSON ALL-FIBER SLASHER



Turns Out EQUAL PRODUCTION

Determined to cut costs in its slasher room, an important southern cotton mill had us work with them to determine the cost of replacing three old cotton slashers with a modern ALL-FIBER JOHNSON 9 cylinder slasher.

The indicated savings were so impressive that this mill immediately placed an order for a modern Johnson machine.

Labor, steam, floor space, and replacement part requirements are sharply reduced. Better cotton warps are assured. Loom production is increased. If the mill decides to go into synthetics, it has a machine that will do a superior sizing job on rayon, spun rayon, acetate, nylon, orlon, and other yarns — at high production speed.

If you are interested in lowering your sizing costs, write us for further information about the Johnson Sizer. No obligation is involved.

Charles B. Johnson

MACHINE WORKS

PATERSON, NEW JERSEY

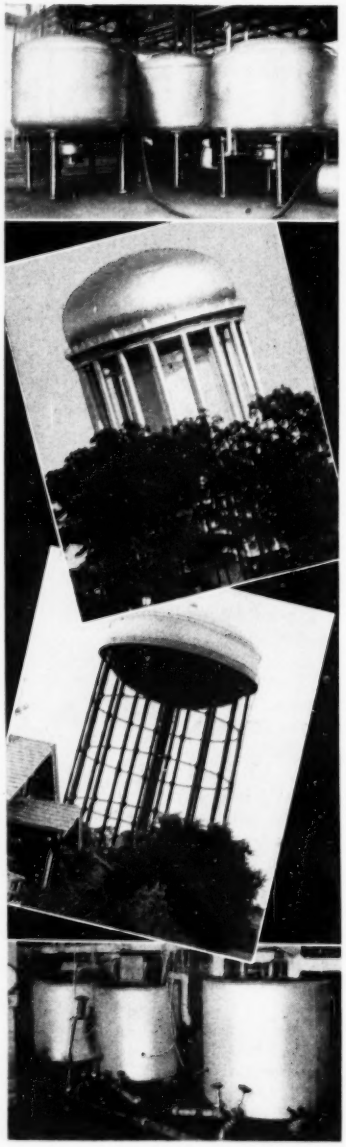
REPRESENTATIVES

New England: J. S. Fallow & Co. New Bedford, Mass.

Canada: J. S. Fallow & Co. 4846 Sherbrooke St., W. Montreal, Quebec, Canada

For the South: Lucas Associates, Inc. Charlotte 1, N. C.

98 YEARS OF EXPERIENCE IN BUILDING TANKS



KETTLES
DYE-VATS
KIERS
JIB-BOXES

● Cole builds vessels to your specifications — dye-vats, kiers, starch-kettles, acid tanks, jib boxes, or other processing vessels for the finishing and dyeing industry . . . in stainless steel, nickel-clad steel, or of standard steel lined with monel metal.

And, for almost a century Cole elevated tanks have provided a dependable water supply for mills and communities.

Our long experience in the design and fabrication of tanks and vessels for the textile industry may be of help to you.

●

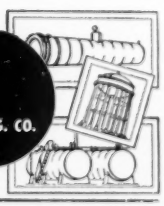
Write for latest Cole catalog—"Tank Talk."

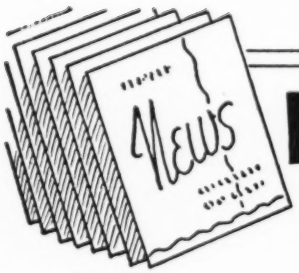
Established 1854

R. D. COLE MFG. CO.

NEWNAN, GEORGIA

ELEVATED TANKS • VESSELS • CYLINDERS
TOWERS • BINS • STANDPIPES





HELPFUL Booklets FREE

Here is the "cream of the crop" of literature on textile subjects as prepared by TEXTILE INDUSTRIES' advertisers to aid in mill operation and management. These reference books and catalogs are free for the asking and there is no obligation involved. Read through the list carefully for booklet on the subject or new Equipment in which you are interested. Then fill in the numbers of those desired on the coupon on page 206 and mail it to TEXTILE INDUSTRIES. ("First Listings" shown below are not confined solely to TEXTILE INDUSTRIES' advertisers.)

This service is restricted to those engaged in operation and management of textile concerns.

5-1 Dyeing of Dacron and Orlon 41. Booklets by Sandoz Chemicals show techniques, technical data and tables. Very comprehensive. Write Sandoz Chemical Works, Inc., 61 Van Dam Street, New York, New York.

5-2 Air-Cooled Heat Exchangers. 12 page illustrated bulletin shows wide variety of industrial cooling and condensing applications of FLUOR "Fin-Fan" Heat exchangers. Gives basic data requirements. Write The FLUOR Corporation, Ltd., 2500 South Atlantic Blvd., Los Angeles 22, California.

5-3 Water Repellent Finishes. American Cyanamid Company's Textile Resin Department offers technical bulletin "PARAMUL" Repellent DC-1 and DC-2 which describes methods of applying firm's line of water repellents. Write American Cyanamid Co., 30 Rockefeller Plaza, New York 20, New York.

5-4 Wet Finishing Machinery. Comprehensive anthology of Riggs & Lombard booklets showing their "Fleet Line" of Wet Finishing Machinery is available. Write Riggs & Lombard, Inc., Lowell Massachusetts.

5-5 Antara Chemical Products. 28 page catalogue covers such product groups as detergents, wetting agents, emulsifiers, brighteners, sequestrants, and dyeing assistants. Write H. G. Shelton, Sales Manager, Antara Division, General Dyestuff Corporation, 435 Hudson Street, New York 14, New York.

5-6 Molded Nylon in Textile Machinery. Booklet by du Pont shows how molded du Pont nylon may be used in many textile machine applications. Gives advantages and properties. Write Polychemicals Department, E. I. du Pont de Nemours Inc., Wilmington, Delaware.

5-7 Pin-Plates For Pin Tenters. Data sheets and samples of Pin-Plates by Southern Textile Works. Gives specifications and prices. Write Southern Textile Works, P. O. Box 406, Anderson, South Carolina.

5-8 Warner & Swasey Sulzer Weaving Machine. Well-illustrated presentation shows working principles of new Warner & Swasey light-weight shuttle loom. Gives dimensions and specifications, possible PPM. Write Warner & Swasey Company, 5701 Carnegie Avenue, Cleveland 3, Ohio.

5-9 Electric and Pneumatic Controllers. Color Catalogue by Minneapolis Honeywell shows how application of "ELECTRONIK" principle to countless control problems affords improvements in process efficiency, etc. Write Minneapolis Honeywell Regulator Company, Wayne and Windrim Avenues, Philadelphia 44, Pennsylvania.

5-10 Crimped Nylon Interlining. Well-executed Brochure by Star Woolen Company shows uses and advantages of "Ny-Sul-lite," the first crimped nylon interlining. Write Star Woolen Company, Cohoes, New York.

5-11 Rapid Combustion Method For Commercial Stearic Acids. Booklet by Emery Industries give facts on a simplified method developed for determining the composition of commercial stearic and palmitic acids. Write Emery Industries, Inc., Department 5, Carew Tower, Cincinnati 2, Ohio.

5-12 Split-Race Ball Bearings. Bulletin by Split Ballbearing Corporation shows method of using ballbearings in thin races where maximum efficiency is desired in minimum space. Gives applications and specifications. Write Split Ballbearing Corporation, Lebanon, New Hampshire.

5-13 Saco-Lowell's Silver Anniversary. Bulletin in color tells the Saco-Lowell story and tells of the progress of spinning. Interesting institutional data on the industry. Write Saco-Lowell Shops, 60 Batterymarch Street, Boston 10, Mass.

5-14 Recording and Controlling Viscosity. Brochure by Norcross gives whys and wherefores of industrial viscometers along with general information on design and operation of the Norcross Recording Viscometer. Write Norcross Corporation, 247 Newtonville Avenue, Newton 58, Massachusetts.

5-15 Rubber Covered Rolls. Bulletin shows facilities of Tye Rubber Company to produce rubber covered rolls to specifications of customers. Write The Tye Rubber Company, Andover, Mass.

5-16 Industrial Valves. Lunkenheimer booklet shows its various types of valves including cross sections of each and specifications. Write Lunkenheimer Corporation, P. O. Box 360, Annex Station, Cincinnati, Ohio.

5-17 Packing Tips For The Textile Industry. Brochure shows how to save headaches and dollars in packing goods in standard and specialty corrugated boxes. Shows Hinde and Dauch's line of boxes. Write Hinde and Dauch, Sandusky, Ohio.

CAMS

with-
Exclusive
Features

Sam Cam says:

From PRECISION only—exclusive formula, NON-SLOUGHING Cams (standard or special) for spinning and twisting—at no EXTRA COST—providing amazing, up-to-4 way, yarn control. Get "jewelled movement" ring rail reversing, longer lived accuracy—no sloppy backlash, due to Cams. Build firmer, longer running, higher speed bobbins. Cut your time and costs. No other cams are made with this mathematical accuracy. Write for our Cam Computation Chart and full information, now!

"The Cam House"

- Stock • Special • Duplicated
- Pilling Wind (3 and 4 lobe)
- Warp Wind (Combination)
- Wool Spinning

Face hardened Cast Iron or Alloy.

Engineers : Manufacturers — Cams · Bearings Gears . Chain Drives

DIVISION OF TURNER MANUFACTURING CO.

PG **PRECISION**

GEAR AND MACHINE CO

Ph. 4-6857 2001 North Tryon St., Charlotte, N.C.

THE SOUTH'S LARGEST MANUFACTURER OF GEARS AND CHAIN DRIVES

"What You Want When You Want It"

WONALANCET

Carded and Combed

COTTONS and SLIVERS

for

Woolen and Worsted Mills

WONALANCET COMPANY

128 Burke St., Nashua, New Hamp.
And 153 Peachtree St., Atlanta, Ga.

GENERAL, ECONOMICAL, MANAGEMENT . . .

4. HOW FACTORING CAN INCREASE PROFITS—Describes how factoring works out in keeping client's capital liquid and attitude of factor toward checking credits, including typical balance sheet.—COMMERCIAL FACTORS CORP., New York City.

16. TEXTILE RESEARCH—Booklet describing Research Department's commercial scale facilities for cotton spinning, worsted spinning, etc. Explains organization and function of department.—AMERICAN VISCOSE CORP., SYLVANIA DIV., 350 Fifth Ave., New York, N. Y.

17. A FAIR DAY'S PAY AND IN RETURN A FAIR DAY'S WORK—8-page booklet outlining the services offered to industry for the proper utilization of labor, material and equipment, and the resulting advantages for both labor and management.—AMERICAN ASSOCIATED CONSULTANTS, INC., 250 Park Ave., New York, N. Y.

18. FACTORING—Information available on how factoring works to aid client in keeping capital fluid and to avoid credit losses. Inquiries regarding these services welcome. L. F. DOMMERICH & CO., 271 Madison Ave., New York 16, N. Y.

19. INDUSTRIAL BUILDING—A 32-page booklet entitled "U.S.S. 12, U.S.S. 17 Stainless Steel Walls and Roofs for Industrial Buildings," is now available for distribution. This Publication illustrates the use of type 410 and type 430 Stainless Steel Sheets in the construction of industrial and semi-industrial buildings.—U. S. STEEL CO., 525 William Penn Pl., Pittsburgh 30, Pa.

20. VISION TESTING EQUIPMENT—Pamphlet entitled "What You Can Expect From a Good Vision Program" written by a prominent personnel director. Also circular describing the Keystone Occupational Visual Service—KEYSTONE VIEW COMPANY, Meadville, Pa.

22. THE WONALANCET WAY—Is the title of an editorial booklet published five times a year and deal with current problems which appear worthwhile at the time they are written.—WONALANCET COMPANY, 128 Burke St., Nashua, N. H.

PLANT & PLANT MAINTENANCE . . .

102. "TANK TALK"—Sixteen page booklet of illustrations showing various types of elevated steel tanks constructed and erected by manufacturers as well as stand pipes, reservoirs, storage and high pressure vessels, cylinders, along with helpful technical data. Also a list of what a few of the cotton mills, etc., said.—R. D. COLE MANUFACTURING COMPANY, Newnan, Ga.

103. HUMIDIFICATION, EVAPORATIVE COOLING—Bulletins available displaying AMCO automatic self-cleaning atomizers, controls, and evaporative cooling equipment.—AMERICAN MOISTENING CO., 260 W. Exchange St., Providence, R. I.

107. FINNELL SCRUBBERS—Illustrated leaflets describing and giving specifications for the Finnell floor scrubbing machines.—FINNELL SYSTEM, INC., Elkhart Ind.

108. MAPLE FLOORING—Booklet describing finishing of Northern Hard Maple Flooring — list of M.F.M.A.-approved heavy-duty floor finishes.—MAPLE FLOORING MANUFACTURERS ASSOCIATION, Pure Oil Bldg. 35 East Wacher dr., Chicago 1, Ill.

111. INDUSTRIAL FANS — Catalog sheets with specifications describing the complete line of Murray Industrial fans for plant ventilation. Seven sizes described from 24" with 1/3 HP motor delivering 5700 CFM to 54" with ¾ HP delivering 17,386 CFM with advantages of heavy gauge metal construction brought out.—H. C. BIGLIN CO., 177 Harris St., N.W., Atlanta, Ga.

113. COTTON MILL EQUIPMENT — This book traces pictorially the steps in processing raw cotton into finished cloth. It shows the equipment needed for all phases of production, as well as containing a "Useful Information" section on Power Factor Correction, Lighting, Circuit Protection, etc.—WESTINGHOUSE ELECTRIC CORP., 511 Wood St., Pittsburgh 30, Pa.

119. MOPPING EQUIPMENT — Complete catalog and circulars containing information on the many sizes and styles that can be had.—S. C. LAWLOR CO., 121 N. Aberdeen St., Chicago, Ill.

121. STEAM GENERATORS — Bulletin P-1 describes compact package type boiler for heating, power, or processing. Described as fully automatic, firing all liquid or gaseous fuels.—THE CYCLOTHERM CORP., Oswego, N. Y.

124. GRADUMATIC HUMIDIFICATION—Bulletin 1151 shows advantages of this graduated air and water pressure system of direct humidification. Psychrometric control also described.—PARKS-CRAMER COMPANY, Fitchburg, Mass.

126. "SENTRY-LITE" bulletin illustrating and describing light unit that comes on automatically when power fails, illuminating 10,000 sq. ft. 9 hours or longer.—CLEVELAND ELECTRIC CO., 557 Marietta St. N.W., Atlanta 3, Ga.

127. SOLENOID VALVES — Bulletin "V" lists sizes from ½ inch to 3 inches; valves for normally open or closed service; stainless steel or Jenkins disc seats; three way solenoid valves, etc; typical installations.—THE JOHNSON CORP., Three Rivers, Mich.

129. AIR CONDITIONING AND HUMIDIFICATION—Catalog section 101 lists and briefly describes each item of the complete Bahnson line of equipment for textile mill air conditioning and humidity control.—THE BAHNSON COMPANY, Winston-Salem, N. C.

130. LIGHTING EQUIPMENT—Bulletin lists and describes the Crouse-Hinds line of lighting equipment which includes flood lights, searchlights, types of industrial lighting fixtures of vapor-tight, dust-tight, and explosion-proof types.—CROUSE-HINDS COMPANY, Syracuse 1, N. Y.

131. "AIR PROCESSING"—Set of three bulletins showing real meaning of the term, where it can be used, the requirements for a successful system, etc. J. O. Ross Engineering Corp., 444 Madison Ave., New York 22, N. Y.

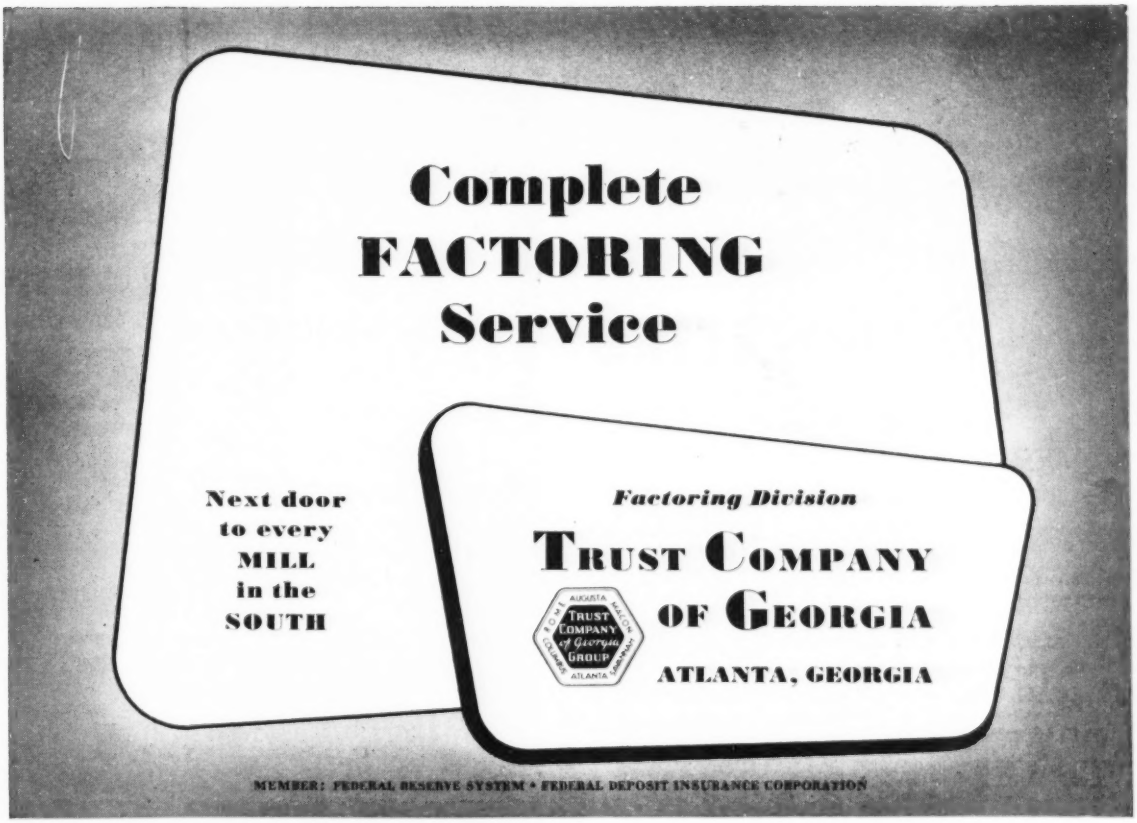
132. SANDING AND FINISHING—With Coated Abrasives, 88 page illustrated booklet on modern production methods, including information on the use of "Texalox" Cloth take-up roll covering and Fillet Cloth for sharpening cardcloth.—THE CARBORUNDUM CO., Niagara Falls, N. Y.

133. PAINTING SPECIFICATIONS AND COLOR CHIPS—Industrial Paint and Color Guide, CC446, gives full painting specifications for exterior and interior of industrial plants with complete color samples—THE SHERWIN-WILLIAMS CO., Painter Maintenance Div., Cleveland, Ohio.

135. COLOR CONDITIONING—Booklet illustrated in color describes how Du Pont color conditioning puts color to work for you. Many ideas on safety brought out which color can aid.—E. I. DU PONT DE NEMOURS & CO. INC., Finishes Div., Wilmington 98, Delaware.

137. PUMPS AND COMPRESSORS — Bulletin QP-11 presents the standard types of Gardner-Denver air compressors, centrifugal pumps, steam and power reciprocating pumps in a brief and comprehensive manner to enable the prospective user to select the size and type for specific needs.—GARDNER-DENVER CO., Quincy, Ill.

138. METAL CONVEYOR BELTS—Recent catalog describes and illustrates Ashworth's entire range of manufacturers, including the new Flat Wire Belt design and application, along with their woven wire constructions and Positive Drive Chain Edge belts.—ASHWORTH BROS. INC., Metal Products Div., Fall River, Mass.



139. STEEL SHOP EQUIPMENT.—Write for profusely illustrated Hallowell folder describing line of shop desks, tool stands and carriers, cabinets, etc., adaptable to a wide range of uses. Standard Pressed Steel Co., Box 5-2, Jenkintown, Pa.

146. FUNCTIONAL GLASS BLOCK DATA — Folder shows in detail daylighting function of Light-directing and Light diffusing Functional Glass Blocks. PITTSBURGH CORNING CORP., 307 4th Ave., Pittsburgh 22, Pa.

147. HEATING AND AIR CONDITIONING CONTROLS—Bulletin F-2287-3 describes and illustrates automatic electric controls for heating, ventilating and air conditioning systems.—BARBER-COLMAN CO., Rockford, Ill.

150. RIHCO HUMIDIFIERS AND COOLING SYSTEMS—Bulletin describes new atomizers with construction lessening air consumption in humidifier systems, evaporative cooling systems.—ALDRICH MACHINE WORKS, Greenwood, S. C.

151. INDUSTRIAL BRUSHES—Illustrated booklet of industrial brushes featuring textile usage on shears, printing machines—also flock, raising and cylinder brushes.—M. W. JENKINS SONS, INC., 444 Pompton Ave., Cedar Grove, N. J.

153. LAMINATED TEXTILE PLASTICS—Booklet by Synthane Corporation shows variety, application, and advantages of laminated plastic parts and supplies for the textile industry.—Write: SYNTHANE CORPORATION, Textile Division, Oaks, Penna.

155. DUCTLESS AIR CONDITIONING—24-page illustrated Catalog No. 2 on Amco humidification and ductless evaporative cooling, along with other Amco humidification devices. Contains relative humidity tables and textile regains.—AMERICAN MOISTENING CO., Providence, R. I.

162. MODERN METHODS OF TEXTILE FLOOR MAINTENANCE—Illustrated treatise on the history of floor cleaning in textile plants and a detailed description of new methods for reducing floor cleaning costs as well as preserving textile mill floors.—G. H. TENNANT COMPANY, 2530 N. Second St. Minneapolis 11, Minn.

157. MAINTENANCE—Silicone water-repellent for masonry described in data sheet XR-129G-1. Properties and application of an invisible, durable, nonplugging, silicone masonry water repellent that is inexpensive and easy to apply fully discussed. — DOW-CORNING CORP., Midland, Mich.

165. CLEAN, DRY, COMPRESSED AIR—8-page color illustrated bulletin thoroughly describes aftercooling, air separating, and air filtering. Also gives size and capacity of R. P. Adams equipment. — Write: R. P. ADAMS COMPANY, INC., 216 E. Park Drive, Buffalo, New York.

167. COLOR CONDITIONING FOR INDUSTRY—Booklet describing how color is used to reduce maintenance costs, increase production, curtail fatigue, improve employee morale.—E. I. DU PONT DE NEMOURS & CO., INC., FINISHES DIV., Wilmington, Delaware.

169. MACHINE BRUSHES—Illustrated Folder shows many types of machine brushes and describing their particular use for printing, washing, brushing, singeing, and shearing is sent free upon request.—Write: INDUSTRIAL BRUSH COMPANY, INC., Woodside Avenue, Little Falls, New Jersey.

173. BLOWERS AND EXHAUSTERS — Bulletin No. 3014-D describes types "E" and "RE" electric blowers and exhausters. Uses and full description of each with detail drawings.—BUFFALO FORGE CO., 490 Broadway, Buffalo 5, N. Y.

174. PAINT STRIPPING BOOKLET—Illustrated booklet providing helpful data on latest materials and methods for simplified stripping of paint. Methods described include: (1) steam gun; (2) hot flow-on; (3) cold spray; and (4) tank immersion.—OAKITE PRODUCTS, INC., 22 Thames St. New York 6, N. Y.

179. BETTER WAYS—Form 2020, condenser catalog of standard and special model Toledo Industrial Scales that are being used in receiving, shipping, and production operations by all industries including the textile field.—TOLEDO SCALE CO., Box 97, Toledo, Ohio.

181. AIR FILTRATION—Bulletin 234 describes and illustrates the Auto-Airmat, which is the Automatic Dry-Type air filter. Principle of operation, performance characteristics, construction and installation fully discussed.—AMERICAN AIR FILTER COMPANY, INC., 275 Central Ave., Louisville 8, Ky.

188. PROGRESSING-CAVITY PUMPS — A new principle in pumps. Self-priming, positive displacement, uniform flow features discussed.—ROBBINS & MYERS, INC., Pump Div., Springfield, Ohio.

POWER TRANSMISSION, MOTORS, BELTING, LUBRICATION . . .

201. V-BELT DRIVE CATALOG — This handy, pocket-sized catalog helps you make quick and easy selections of any Dayton V-Belt Drive from 1 to 1000 HP. Contains many concise, accurate drive tables, diagrams, and other important engineering data.—DAYTON RUBBER CO., Dayton, Ohio.

202. RELIANCE MOTOR—Bulletin C-130 on the explosion-proof, corrosive-resisting a-c motor. Design features exclusive with the new motor are enumerated and illustrated in the bulletin.—THE RELIANCE ELECTRIC & ENGINEERING CO., 1076 Ivanhoe Road, Cleveland, Ohio.

203. TREADED LEATHER BELTING—This 16 page booklet describes Houghton's line of patented, specially treaded leather belting for all types of power transmission. Booklet includes valuable engineering and maintenance section.—E. F. HOUGHTON & CO., Philadelphia, Pa.

206. LOOM MOTOR BULLETIN—The new design of this ball bearing motor is claimed to represent an advance in the design of loom motors fully discussed.—THE LOUIS ALLIS CO., 427 E. Stewart St., Milwaukee, Wisconsin.

212. GATES TEXTILE ACCESSORIES — Handy pocket-size catalog RHM-7, fully illustrated, gives specifications of Gates textile accessories including pickers, lug straps, check straps, cone belts, evener belts, harness straps, take-up roll covering and others.—THE GATES RUBBER COMPANY, 1001 Broadway, Denver 17, Colo.

207. TRICO OILER INSTALLATION—Twelve interesting pages of actual "on the job" photos of Trico oiler applications on nationally recognized machinery and equipment.—TRICO FUSE MFG. CO., 2948 N. 5th St., Milwaukee 12, Wisc.

218. BALL BEARINGS FOR TEXTILE MACHINERY—A 40-page catalog illustrating Fafnir Ball Bearing units for replacement or new applications in all phases of textile processing.—THE FAFNIR BEARING CO., New Britain, Conn.

224. MORE ABOUT THE LINT-FREE MOTOR—Construction and application of Westinghouse's lint-free textile motors are described in a revised leaflet now available.—Write for: B-3515-A, WESTINGHOUSE ELECTRIC CORPORATION, Box 2099, Pittsburgh 30, Pennsylvania.

227. WOOLEN AND WORSTED MILL ELECTRICAL EQUIPMENT.—Booklet by Westinghouse follows processes through the mill and shows application and advantages of Westinghouse equipment. —Write for: B-4698, WESTINGHOUSE ELECTRIC CORP., Box 2099, Pittsburgh 30, Pennsylvania.

229. DODGE GENERAL POWER TRANSMISSION MACHINERY—Catalog describes various types of power transmission apparatus by Dodge. Gives specifications, sizes, applications, and prices. Very comprehensive.—Write: DODGE MANUFACTURING CORP., Mishawaka, Indiana.

230. HEAT RESISTING LUBRICANT—Descriptive pamplet on Ben Boy High Heat Resisting Lubricant for use in any bearing using excessive amounts

FOR KNITTING OR WEAVING

Insist on

AMERICAN & EFIRD YARNS

AMERICAN DURENE®
As advertised in leading magazines

NATURAL YARNS
Combed Peeler or Sak, 10's-90's Single
Combed Peeler or Sak, 10's-100's Ply
Carded Peeler, 8's-30's Single

THREAD DIVISION
LAWRENCEBURG, KENTUCKY

ALSO SYNTHETICS AND WORSTED YARNS

AMERICAN & EFIRD MILLS, INCORPORATED
Mount Holly, North Carolina • W. H. SUTTENFIELD Vice-President and Sales Manager
Successors to American Yarn & Processing Company and Efird Manufacturing Company

MOUNT HOLLY, N. C. Mr. C. E. Wood, Miss E. R. Abernathy, Mr. T. J. Davis
HIGH POINT, N. C. Mr. E. J. Holbrook
CHATTANOOGA, TENN. Mr. H. W. Davenport, 728 James Bldg.
BOSTON, MASS. Mr. L. T. Howick, 222 Summer Street
PHILADELPHIA, PA. Mr. Wm. Montgomery, 3701 N. Broad Street
ALBEMARLE, N. C. Mr. A. K. Winget
CHICAGO, ILL. Wood & Hutchinson, 222 W. Adams Street
GASTONIA, N. C. Mr. T. C. Smotherman
NEW YORK, N. Y. 51 Madison Avenue
ANNISTON, ALA. Mr. Horace Frierson

KALEPON W

When used as a protective colloid in the bleaching, dyeing, carbonizing and stripping of wool — it is like putting fire insurance on your mill.

KALEPON W is a degradation product of Albumin. It acts as a buffer against acids, alkalies, peroxide and stripping agents.

- The wool has more life to it; is loftier even when dyed with *Immedial* Leuco Colors, in alkaline bath.
- There is no deterioration of strength and elongation.
- Excellent for dyeing cops or cheeses in machine.
- It levels the shade.
- No royalties to pay when using KALEPON W as a protective colloid for stripping wool.

Send for technical data sheet.

KALI MANUFACTURING COMPANY
Manufacturing Chemists
427 MOYER ST. PHILADELPHIA 25, PA.

of oil or grease or frequent bearing failures.—GEORGIA-CAROLINA OIL CO., 1403 Sixth St., Macon, Ga.

235. JOHNSON LEDALOYL BEARING BRONZE—Illustrated booklet telling the complete story of Johnson Ledaloyl Bronze, the newest development in self-lubricated bronze for textile bearings and bushings.—JOHNSON BRONZE COMPANY, New Castle, Pa.

236. LEATHER BELTING CALCULATOR—Handy and attractive calculator for determining belt, speeds, horsepower per inch of belt widths, etc., will be sent free on request.—J. E. RHOADS & SONS, 35 N. 6th St., Philadelphia, Pa.

237. MOTOR CONTROL—Brochure gives description and engineering data on the Cutler-Hammer Motor Control for roving and spinning frames. Users listed and advantages discussed.—CUTLER-HAMMER INC., Milwaukee, Wisc.

239. LICKERIN AND DOFFER BELTS — Brochure and full information on Lickerin and Doffer belts supplied by:—TON-TEX CORPORATION, 16 West 61st St., New York 23, N. Y.

256. METERED LUBRICATION—Bulletin 6A has 12 illustrated pages showing how central lubricating systems are applied to combers, roving frames, winders, knitters, looms, etc.—BIJUR LUBRICATING CORP., Rochelle Park, N. J.

259. SUNOTEX MACHINE OIL—Booklet describing this machine oil as being "custom-made" for the textile industry. Advantages discussed and pictures of uses which includes knitting machinery.—SUN OIL COMPANY, Philadelphia 3, Pa.

262. SMALL PRECISION METAL PARTS. — Catalog by Torrington Company describes many special precision metal parts made by its Specialties Division.—Write: THE TORRINGTON COMPANY, SPECIALTIES DIVISION, 500 Field Street, Torrington, Connecticut.

264. BALL BEARINGS FOR TEXTILE INDUSTRY—A new loose-leaf catalog illustrating, describing and listing all special ball bearings developed for textile use.—NEW DEPARTURE, Division of General Motors Corp., Bristol, Conn.

266. LUBRICATION—Bulletin BG2-DC, describes properties of Silicone greases used in motors at high speeds and temperatures, on oven conveyors, tenter frames, can dryers, etc. Decrease by 10 to 1 in re-lubrication requirements described.—DOW-CORNING CORP., Midland, Mich

281. LOOM MOTORS—Leaflet 51B711A describes all the characteristics of the Allis-Chalmers loom motor required for efficient loom power, high maximum torque, extra overload capacity for breaking-in operation and smooth power.—ALLIS-CHALMERS MFG. CO., Milwaukee, Wis.

INSTRUMENTS, STEAM SPECIALTIES . . .

301. JOHNSON ROTARY PRESSURE JOINTS—Bulletin describing the rotary pressure joint which requires no packing, no lubrication and no adjustment, giving installation and maintenance instruction, types, sizes, dimensions and prices.—THE JOHNSON CORP., Three Rivers, Mich.

302. INSTRUMENTS—Illustrated catalog covering uniformity analyzer, acoustical measuring devices, and other non-destructive industrial measuring instruments. Illustrated brochure describing hypersonic equipment for both laboratory and pilot plant use in the field of ultrasonics.—BRUSH DEVELOPMENT CO., 3405 Perkins Ave., Cleveland 14, Ohio.

303. PROCESS CONTROL EQUIPMENT—Catalog containing brief description of standard and special process control equipment engineered for textile industry. Includes schematic diagrams. — MASON-NEILAN REGULATOR CO., 1190 Adams St., Boston, Mass.

311. PIPING POINTERS—Industrial maintenance book covering installation and handling of piping, valves, fittings. Well illustrated, practical tips.—CRANE CO., 836 S. Michigan Ave., Chicago 5, Ill.

314. MOISTURE CONTENT CONTROL — Bulletin F-3156 giving details of features and benefits of moisture equipment control for slashers and textile applications. — BARBER-COLMAN CO., Rockford, Ill.

319. GUIDE TO CORRECT INSTRUMENT SELECTION—This completely revised edition gives a comprehensive bird's-eye view of the companies' entire instrument line. Bulletin 98170.—TAYLOR INSTRUMENT COMPANIES, Rochester 1, N. Y.

321. RED-RAY BURNERS — Bulletin describing use of Red-Ray Burners in preheating and partial drying to increase capacity of frame.—RED-RAY MFG. CO., 445 W. 45th St., New York, N. Y.

324. STROBOTAC — Informative reprint, "Strobotac Boosts Efficiency in Woolen and Synthetic Mills."—GENERAL RADIO CO., Cambridge 39, Mass.

332. NEW INFORMATION ON INSTRUMENT GAGES—24-page bulletin by Taylor Instrument Companies supplies considerable information on features, dials, and scales available to textile industry with excellent reference material on different types of actuation.—Write for: No. 98214, TAYLOR INSTRUMENT COMPANIES, Rochester 1, New York.

334. TEXTILE MILL INSTRUMENTS—Eight-page bulletin 98180 describes the use of automatic control instruments used on such processes as size cooking, storage kettle, size boxes, slashers, dye vats and driers.—TAYLOR INSTRUMENT COS., Rochester, N. Y.

337. COUNTING DEVICES—Catalog of Trumeter's complete line of counters for every application where counting, measuring or registering is required. Colored pictures illustrate each application.—TRUMETER COMPANY, 1265 Broadway, New York 1, N. Y.

CARDING, SPINNING, WINDING . . .

401. LUMMUS DUSTLESS, STEEL BLENDING FEEDERS—Bulletin describing automatically closing, positively locking door on feeders to prevent overloading, choking.—ALDRICH MACHINE WORKS, Greenwood, S. C.

402. AUTOMATIC CLEANING AND OVERHEAD HANDLING FOR TEXTILE MILLS—24-page bulletin describing the American Monorail Automatic Cleaner for preventing accumulation of lint on spinning, twisting, winding and warping machines. Also for cleaning monitors and card room ceilings.—THE AMERICAN MONORAIL CO., Cleveland, Ohio.

404. LAPLESS ENDLESS SPINNER — Bulletin and full information will be supplied on lapless endless spinner and coning belting.—TON-TEX CORPORATION, 16 West 61st St., New York, N. Y.

408. CARD GRINDING INFORMATION—Outlines care of grinders, instructions on speed to run grinders, amount of oil to add to machine and other pertinent information.—R. S. ROY & SON CO., Worcester, Mass., and Charlotte, N. C.

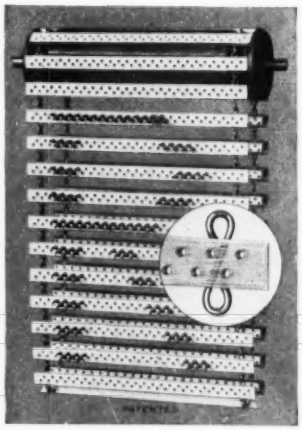
412. SERVICE FOLDER — Folder covers textile metal products including spinning and twisting cylinders, card screens, etc.—JENKINS METAL SHOPS, INC., Gastonia, N. C.

414. WORSTED SPINNING—Bulletin explaining and illustrating Saco-Lowell's new system for worsted

Another Fine Rice Dobby Product

IMPROVED DOBBY BARS

The Improved bar with clear peg holes and eyes that will not twist. Made of thoroughly air dried stock.



HARRIS "Heavy Duty" Lug Strap

Leather and Fibre Adjusting Strap

Special Braided Loom Cord

"Wirecore" Loom Cord

Pick Arm Lug Strap

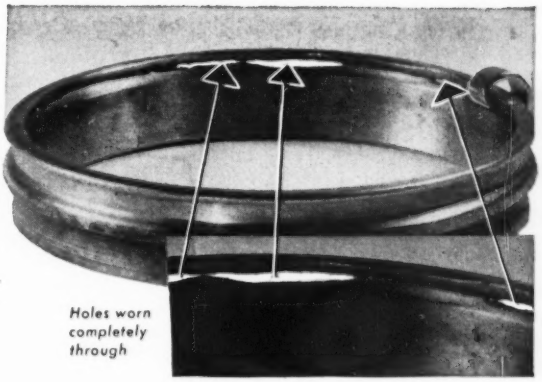
Dobby Pegs

RICE DOBBY CHAIN CO.

Millbury, Massachusetts

Southern Representatives

R. E. L. HOLT, JR., ASSOC., Jefferson Bldg., Greensboro, N. C.



Holes worn completely through

At what stage do OLD rings become more expensive than NEW?

There is a time, long before the above condition, when it PAYS to replace worn rings. When that time comes, remember DIAMOND FINISH, world's most complete and modern line of rings for spinning and twisting all textile fibers.

WHITINSVILLE (MASS.) SPINNING RING CO.

DIAMOND FINISH

Makers of Spinning and Twister Rings since 1873

Southern Representative: W. K. SHIRLEY, 25 Oak St., Belmont, N. C.

spinning, from top to yarn in five economical and efficient stages.—SACO-LOWELL SHOPS, 60 Batterymarch St., Boston 10, Mass.

415. DOUBLER-TWISTER FOR LARGE PACKAGES—Bulletin describing two new machines producing straight or tapered top bobbins. Suitable for filament or spun yarns up to three pound capacity. Individual thread stop motion fully discussed.—FLETCHER WORKS, INC., Philadelphia, Pa.

416. THE BRIEF SAGA OF THE RING TRAVELER—An interesting history relative to the ring traveler, which is in reality the basis of the spinning frame. John Thorpe's invention of ring traveler, the development of the spindle, and the invention of Rabeth's Bolster type spindle are covered.—NATIONAL RING TRAVELER CO., Pawtucket, R. I.

418. PACIFIC CONVERTER—Graphic description of machine that cuts any synthetic tow; and when desired, blends it with wool or staple sliver, keeping the fibers parallel, and issuing an even sliver of accurate blend.—WARNER & SWASEY CO., Cleveland, Ohio.

419. TEXTILE APRONS—Illustrated folder showing the steps in manufacture of genuine leather aprons for all types of long draft spinning and card room machinery.—TEXTILE APRON COMPANY, East Point, Ga.

420. AUTOMATIC FILLING WINDING — Eight page, two color booklet describing the operation and mechanism of the Hacoba winder.—ATKINSON, HASERICK & CO., 211 Congress St., Boston Mass.

421. CARD ROLL COVERS—Brochure describing the Davis seamless roll covers. Lists advantages, specifications and offers free trial.—THE TEXTILE LABORATORIES, P. O. Box 1003, Gastonia, N. C.

422. MODERN TEXTILE ROLL COVERING—Illustrated booklet on roll covering problems with charts on correct usages. Also data on Acotex long draft aprons.—ARMSTRONG CORK CO., Industrial Division, TEXTILE PRODUCTS SEC., Lancaster, Pa.

426. UNIRAIL UPTWISTER—Bulletin describes Universal Winding's headless package of bobbin take-up Unirail Uptwister which gives you higher yarn quality and better packages at faster speeds and lower costs, according to the bulletin. Well illustrated with advantages discussed.—UNIVERSAL WINDING COMPANY, P. O. Box 1695 Providence 1, R. I.

430. DIXON DATA — Dixon house organ entitled "Dixon Data," which is available in a new form every other month. These house organs contain information on spinning problems as they relate to saddles and component parts.—DIXON LUBRICATING SADDLE CO., Bristol, R. I.

432. PRECISION TEXTILE WINDING—Bulletin on Kidde Tensions and Density Control for winding rubber cotes.—WALTER KIDDE & CO., INC., Belleville, N. J.

435. DOUBLE DECK TWISTERS—Bulletin describes Jumbo (8 oz. to 16 oz. headless or take-up spool packages) and Acme (up to 10 oz. packages) models for high speed twisting of silk, rayon, nylon, etc., to finest deniers.—U. S. TEXTILE MACHINE CO., Scranton 8, Pa.

436. MAINTENANCE INFORMATION FOR YOUR SCOTT TESTER—Booklet containing maintenance data for calibration of Scott Testers, clamps for testers, gear-box lubrication, and recording.—SCOTT TESTERS, INC., Providence, R. I.

437. SPINDLE TAPE LACING EQUIPMENT — Circular No. 54 illustrating and describing the Clipper method of joining spindle tapes.—CLIPPER BELT LACER CO., Grand Rapids 2, Mich.

438. HEADLESS PACKAGE TWISTER ELIMINATES REDRAWING—Literature shows high-speed Face Drive Twister for accurately building tapered or straight-end headless packages which go direct to quilling or warping without redrawing.—U. S. TEXTILE MACHINE CO., Scranton 8, Pa.

443 COMPARATIVE YARN TABLE—Chart giving woolen number (cut and run system), also cotton worsted and metric system; also, Comparative Rayon Denier Yarn Table.—VICTOR RING TRAVER CO., Providence, R. I., and Gastonia, N. C.

445 ROLLER BEARING SPINDLES—Illustrated booklet showing various types of Marquette Roller Bearing Spindles. The unique full-floating footstep bearing is pictured in cut-away views, and its advantages are described.—THE MARQUETTE METAL PRODUCTS CO., 1145 Galewood Ave., Cleveland, Ohio.

446. WINDING MACHINES—Principles and Practices is the title of Bulletin No. 339, Part 2 on the No. 44 Roto-Coner is profusely illustrated with exploded view drawings with charts and tables relative to drum winders.—UNIVERSAL WINDING CO., Providence, R. I.

447. CONE WINDER—Form A95 describes the Foster Model 102 winder which produces the Foster knitting cone for spun yarns, warping cones and tubes for dyeing and twister supply.—FOSTER MACHINE COMPANY, Westfield, Mass.

451. CYLINDER BEARING—New bulletin available describing and illustrating the cylinder bearing for spinning frames and twisters. The bearing fits all popular makes and is self-aligning.—SOUTHERN STATES EQUIPMENT CORP., Hampton, Georgia.

455. PIN DRAFTS—Catalog describing the use and features of the machine, what it can do to cut costs in the processing of natural and synthetic yarns, along with specifications and installation data.—WARNER & SWASEY CO., 5701 Carnegie Ave., Cleveland, Ohio.

456. WARP TYING—Bulletin T-2 on the "Two-In-One" Titan automatic warp tying machine—speed, flexibility, efficiency, and economies fully discussed.—EDDA INTERNATIONAL CORP., 479 4th Ave., New York City, New York.

458. CONICAL RINGS AND FLYERS—Special data available on the Herr conical rings and flyers.—HERR MANUFACTURING CO., INC., 318 Franklin St., Buffalo 2, N. Y.

461. PRECISE WIND MACHINE—Form A-92 describes the Foster Model 75 widely used for winding straight or pineapple cones and tubes of rayon, nylon and other filament yarns.—FOSTER MACHINE COMPANY, Westfield, Mass.

462. TEXTILE MACHINERY PARTS CATALOG—A 24-page illustrated catalog describing the complete line of Dayco and Thorobred textile machinery parts including Cots, Aprons, Loop Pickers, Lug Straps, etc.—DAYTON RUBBER CO., Dayton, Ohio.

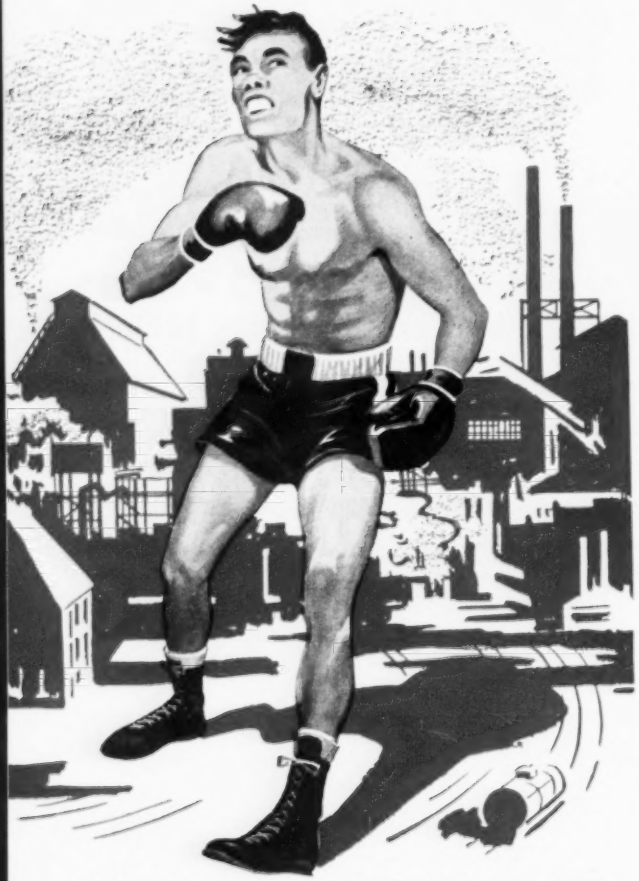
466. CONDENSED LISTINGS—8-page pocket sized booklet listing by plan flow the machinery and mill supplies available. Designed to help purchaser in grouping his orders to greatest advantage.—ATKINSON, HASERICK & CO., Boston, Mass.

467. CARD CLOTHING—8-page booklet by Benjamin Booth Company describes Strip-O-Matic Card Clothing and its advantages.—Write: BENJAMIN BOOTH COMPANY, Allegheny Avenue & Janney Streets, Philadelphia, Pennsylvania.

468. BALL BEARING TOP ROLLS—Bulletin features top roll for Spinning and Roving Frames with sealed lubrication, interchangeable units, low cost servicing and precision quality.—Write: FAULTLESS CASTER CORPORATION, TEXTILE EQUIPMENT DIVISION, Evansville 7, Indiana.

470. TENSION CONTROL IN TEXTILES—Booklet describes many applications and advantages of Link Engineering's "Tod-Cairs." Well-illustrated with diagrams and pictures, it gives specifications and capacities.—Write: LINK ENGINEERING COMPANY,

HOW TO DUCK A KNOCKOUT!



"SIDE-STEP" SHUT-DOWNS WITH THIS *New* HUFFMAN-WOLFE SERVICE!

There's no longer any need to let shut-downs, break-downs and cut-overs put you out for a "long count." These production stoppers of industry can now be reduced to a minimum! Backed by more than half a century of experience, HUFFMAN-WOLFE can supplement your engineering and maintenance staffs to reduce, and in many cases even eliminate such down-time.

At convenient locations throughout the entire Southeast, our experienced crews stand ready to answer your call. Let us show you how we can work with you to eliminate many of the costly effects of "downtime."

For additional information about this new HUFFMAN-WOLFE service write, wire or phone today.

"Torchy" and "Lockjaw" famous symbols of Huffman-Wolfe experience and capability.

HUFFMAN-WOLFE Southern CORP.

MECHANICAL CONTRACTORS
ATLANTA, GEORGIA

P. O. Box 1248 • Telegraph WUX
Telephone LAmar 7726

HIGH OUTPUT MILLS

Rely on

Mount Hope CLOTH OPENING EQUIPMENT

NEW BULLETIN "CO" SHOWS WHY

You get more work hours at minimum operating cost, no costly machine stops. Positive—safe—fully automatic production. Descriptions with actual photos explain each opening device plus typical complete installation.

WRITE NOW—TODAY—FOR NEW BULLETIN "COA" OR HAVE A MOUNT HOPE ENGINEER STUDY YOUR PARTICULAR OPENING REQUIREMENTS—THERE'S NO OBLIGATION, OF COURSE.

MOUNT HOPE MACHINERY COMPANY

15 FIFTH STREET • TAUNTON • MASSACHUSETTS

For More Data Enter 1-65 on Request Postal Card

13343 Elmira Avenue, Dept. D, Detroit 27, Michigan.

471. FACTS ABOUT YOUR FLYERS AND SPINDLES—Booklet by Ideal Machine Shops shows how smooth Flyer and Spindle operation can help produce higher and more efficient output, good quality yarn, minimum wear, and larger bobbins.—Write: IDEAL MACHINE SHOPS, Bessemer City, North Carolina.

WEAVING, SLASHING . . .

501. LOOMS—An accordion type folder is available entitled "Unfolding to You the World's Largest Line of Looms." Information on all types fully discussed. —CROMPTON & KNOWLES LOOM WORKS, Worcester 1, Mass.

502. COUNTING AND MEASURING DEVICES—Condensed Textile Catalog illustrating and describing pick counters, hank counters, cut meters, measuring counters. Wide range of counting devices for production recording on all types of textile machinery.—VEEDER-ROOT, INC., Hartford, Conn.

503. WEAVER'S KNOTTER—A catalog on the Boyce Weaver's Knotter giving a few instructions as to its use, recommendation as to the proper type knotter for the various types of yarns, and the spare parts that go to make up the knotter.—A. B. CARTER, INC., Gastonia, N. C.

504. LOOM SUPPLIES — Literature describing complete line of straps, strapping, pickers, dobby cords, sticks, binders, bumpers brake lining and allied products.—E. H. JACOBS NORTHERN DIV., THE BULLARD CLARK CO., Danielson, Conn.

506. SLASHING HINTS—A 20-page booklet offering helpful hints on warp sizing. Subjects: Size cooking equipment, section beam tension, sizing selvages, cooking, use of split rods, weighing for the mix, tips on cooking equipment, storage in kettles, etc.—SEYDEL-WOOLLEY & CO., 748 Rice St., N.W., Atlanta, Ga.

507. VARIABLE SPEED SLASHER DRIVE — Reeves bulletin G-503 describes their Servo-Control slasher drive which automatically controls tension from creel to beam, and which controls the stretch in the slasher.—REEVES PULLEY CO., Columbus, Ind.

508. LOOM PRODUCTION CHARTS—Convenient celluloid card showing yards per loom per week of 40 hours at various loom speeds.—RALPH E. LOPER CO., Greenville, S. C.

509. MULTI-MOTOR SLASHER DRIVES—Booklet designed to bring the descriptive information on multi-motor slasher drives up to date, and emphasize the improvement in the drive through the use of Rototrol for the control of winding tension.—WESTINGHOUSE ELECTRIC CORP., 511 Wood St., Pittsburgh 30, Pa.

510. THE ROMANCE OF PRAIRIE GOLD—Attractive illustrated book which tells the story of corn and the uses of corn products to industry.—CORN PRODUCTS SALES CO., 17 Battery Place, New York, N. Y.

511. ALUMINUM BEAMS—Catalog No. 1-21 describes Hayes magnesium and aluminum specialties for the textile industry. Illustrates this company's beams that are one-third the weight of conventional types.—HAYES INDUSTRIES, INC., Jackson, Mich.

513. SEYCO PENETRANTS FOR YARN CONDITIONING—Folder describing the scientifically formulated Seyco sizing.—SEYDEL-WOOLLEY & CO., 748 Rice St., Atlanta, Ga.

517. LOADING SYSTEM—Bulletin 417, on pneumatic loading system for Saco-Lowell slasher size box squeeze rolls, contains installation photo, features, specifications, and prices.—THE FOXBORO COMPANY, Foxboro, Mass.

518. NIAGARA TWIST-SETTER—Folder describing the revolutionary Niagara Twist-Setter which has no moving parts. This yarn is sprayed from all sides to afford maximum economy.—SEYDEL-WOOLLEY & CO., 748 Rice St., Atlanta, Ga.

521. STEEL WARP BEAMS—20 page Catalog No. 45 illustrating Standard and Special Purpose Warp Beams for the weaving industry, both broad-loom and narrow fabrics. Also Textile Machinery Specialties.—MILTON MACHINE WORKS, INC., Milton, Pa.

524. JOHNSON WARP SIZES—12 page fully illustrated booklet, describing the 7 cylinder sizer with stretch indicator and finger-tip control of stretch. A point-by-point analysis.—CHARLES B. JOHNSON MACHINE WORKS, Piercy & Holsman Sts., Paterson, N.J.

530. ROTARY UNIONS—New catalog shows how to cut costs, get better sealing, on car dryers, slashers, calenders, etc. Catalog No. 500 entitled "Where Good Connections Count."—PERFECTING SERVICE COMPANY, Atando Ave., Charlotte, N. C.

531. EVENNESS TESTER—Folder explaining how this Tester takes the guess out of quality control and each processing step from carding through spinning.—USTER CORPORATION, Charlotte, N. C.

536. HOMOGENIZER IMPROVES SLASHING — Pamphlet by Manton-Gaulin Manufacturing Company shows how mechanical conversion of size by the Gaulin method produces better size. Gives installation pictures and specifications.—Write: MANTON-GAULIN MANUFACTURING COMPANY, INC., Everett, Massachusetts, U. S. A.

537. WEST POINT'S HOT AIR SLASHER—Bulletin describes advantages and capacities of new hot air slasher by West Point Foundry and Machine Works. Detailed specification included.—Write WEST POINT FOUNDRY AND MACHINE WORKS, West Point, Georgia.

DYEING, FINISHING, CLOTH ROOM . . .

606. HYDRAULIC POWER UNITS—Literature describing hydraulic unit, motor, pump, reservoir, valving a small compact unit for operating of hydraulic calenders, presses, hydraulic controls, etc.—B. F. PERKINS & SON, INC., Holyoke, Mass.

608. WASHERS FOR SCOURING BLEACHING, ACIDIFYING—Well-illustrated booklet shows how Sargent's modern, high-capacity, continuous process washers can help maintain quality and decrease costs. Contains operation diagram and good commentary on construction.—Write:—C. G. SARGENT'S SONS CORPORATION, Graniteville, Massachusetts, U. S. A., for Bulletin 195.

610. PROCTOR DRYING MACHINERY FOR THE TEXTILE INDUSTRY—Illustrated, descriptive catalog on all types of dryers for raw stock, warps, package dyed and automatic skein yarn. Also includes Pre-Boarding and Automatic Boarding Machines for hosiery.—Proctor & SCHWARTZ, INC., 7th and Tabor Rd. Philadelphia, Pa.

615. HIGH PRODUCTION EXTRACTOR FOR RAW STOCK—YARN—HOSIERY—Descriptive bulletin and full information on automatic Twintainer Extractor with bottom-unloading removable baskets. Machine replaces three conventional extractors, lowers labor costs.—FLETCHER WORKS, INC., Philadelphia, Pa.

616. FINISHING DRIVES—32-page booklet covers complete drives Westinghouse has engineered for the textile finishing industry. Describes all types of finishing ranges and discusses advantages of Westinghouse drives for these installations. "Packaged" drives for batch processes covered.—WESTINGHOUSE ELECTRIC CORP., 511 Wood St., Pittsburgh 30, Pa.

617. AUTOMATIC CONTROL SYSTEM FOR CONTINUOUS BLEACHING—Illustrated folder describes the new method of controlling the temperature, pressure, and liquid level in the continuous bleach operation.—TAYLOR INSTRUMENT COMPANIES, Rochester 1, N. Y.

620. REGENERATION OF ZEOLITE WATER SOFTENERS—Booklet explains advantages of International's Lixate Process in regeneration of zeolite water softeners. Shows how it cuts costs and does a better job.—Write: INTERNATIONAL SALT COMPANY, INC., Scranton, Pennsylvania.

622. DYEING OF ORLON, DACRON AND ACRILAN—Three booklets by Sandoz deal with Orlon dyeing, fastness of Dacron, and general preparation of Acrilan goods for dyeing.—Write: SANDOZ CHEMICAL WORKS, 61-63 Van Dam Street, New York 13, New York.

623. SELVAGE GUIDER—The Marshall and Williams positive overfeed and selvage guider is described in a brochure as being developed to meet the most modern requirements of the textile finishing industry. Full description, pictures and advantages discussed.—MARSHALL AND WILLIAMS CORPORATION, 46 Baker Street, Providence 5, R. I.

624. STRAIGHTENING THE WEFT IN CLOTH—Article describing the progress made in this field, and latest machinery available for both skewed and bowed weft straightening.—MOUNT HOPE MACHINERY CO., Taunton, Mass.

625. BALL BEARING ROLLER TYPE SCRAY—Circular No. 904 describing the scray which is for use in handling heavy and large size rolls of cloth. This is used either in finishing plants or in the cloth room of cotton mills. BIRCH BROS., INC., Somerville, Mass.

632. LUG STRAP WASHERS—Series 1-C illustrated bulletin detailing right and wrong application and use of washers.—E. H. JACOBS NORTHERN DIV., Danielson, Conn.

640. "CIRCULATING" SKEIN DYEING MACHINE—Booklet illustrating the principle behind the stainless steel machine which have "Revolutionized Skein Dyeing," for filament and spun synthetic yarns in skein form.—SMITH, DRUM & CO., Philadelphia 33, Pa.

DYESTUFFS, CHEMICALS, SOAPS

700. COTTON FINISHING OILS—New booklet by Twitchell devoted to finishing Sanforized Fabrics contains such specific data as re-wetting speed, imparted softness, resistance to yellowing, and "balance" of these properties.—Write: EMERY INDUSTRIES, INC., Dept. 5, Carew Tower, Cincinnati 2, Ohio.

701. MAGNESIUM APPLICATIONS—Case history information on magnesium application in the textile field, published bi-monthly with latest developments in the magnesium industry.—DOW CHEMICAL CO., Midland, Mich.

705. THEORETICAL AND APPLIED SILK-SOAKING—Attractive 28-page booklet outlining methods of silk-soaking and outlining investigation on the soaking back-winding and degumming of silk.—HART PRODUCTS CORP., 1440 Broadway, New York 18, N. Y.

706. RHONITE RESINS—Booklet describes the Rhonite Resins as being developed to impart handle to fabrics ranging from stiffness through full resiliency to silky suppleness, depending on the demand of the season. Full information and uses given. —ROHM & HAAS COMPANY, Washington Square, Philadelphia, Pa.

708. CAUSTIC SODA BOOKLET—Deals with manufacture, its properties, methods of handling and storage, technical data, etc.—ALKALI SALES DEPT., THE DOW CHEMICAL CO., Midland, Mich.

709. STABILON—For Napthol Dyeing and Printing —reduces cracking and brightens Napthol shades by stabilising fast color salts and bases. Prevents premature decomposition of stock feeder solutions and print pastes—fully discussed in booklet available.—AMERICAN ANILINE PRODUCTS, INC., 50 Union Square, New York, N. Y.

714. NEW SODA ASH BULLETIN—64-page edition contains both new material and revisions of previously data coverig the subject. Ask for Bulletin No. 5.—SOLVAY SALES DIVISION, 40 Rector St., New York 6, N. Y.

715. AQUAROL AND ARKANSAS PRODUCTS—Bulletin on Aquarol water repellent finish with method of preparing bath; also on other Arkansas products for cotton, wool, silk and yarn, hosiery processing. ARKANSAS CO., INC., Newark, N. J.

718. FLAKED CERFAK—Anionic detergent with

Handy Return Card ▶

List Booklets You Want Tear Out and Mail the Attached Card Now!

Please be sure to fill in your Firm's Name and your position on the Coupon. This service cannot be extended to you unless this information is furnished.

Postage Will Be Paid by Addressee

No Postage Stamp Necessary if Mailed in the United States

BUSINESS REPLY CARD

FIRST CLASS PERMIT NO. 582, SEC. 34.9, P. L. & R., ATLANTA, GA.

TEXTILE INDUSTRIES

806 PEACHTREE ST., N. E.

ATLANTA 5, GA.

fast wetting ability excellent for all scouring or wetting operations, according to this four-page folder which includes charts on concentrations to be used.—R. F. HOUGHTON & CO., 303 W. Lehigh Ave., Philadelphia, Pa.

727. **COLOR PRINCIPLES**—Booklet available from Sandoz Chemical describes the fundamental principles of color and its measurement. Booklet has been adopted by several of the leading textile schools.—Write: SANDOZ CHEMICAL WORKS, INC., 61 Van Dam Street, New York 13, N. Y.

745. **RAPIDASE FOR DESIZING**—Bulletin explaining in detail the properties and characteristics of Rapidase.—WALLERSTEIN CO., INC., 180 Madison Avenue, New York 16, N. Y.

749. **WATER SOLUBLE GUMS**—Booklet giving the the origin, gathering, marketing and uses of water soluble gums. This booklet No. 23 is beautifully illustrated, and is one of the few treatises on the subject.—JACQUES WOLF & CO., Passaic, N. J.

753. **TRITON X-100**—Booklet available describing this highly concentrated detergent and wetting agent. Main uses fully discussed and chemical properties brought out.—ROHM & HAAS COMPANY, Philadelphia 5, Pa.

758. **TEXTILE SPECIALTIES** — Listing and describing a wide and complete range of specialties manufactured and sold by American Cyanamid Company formulated to the latest advances in textile chemistry.—AMERICAN CYANAMID COMPANY, 30 Rockefeller Plaza, New York 20, N. Y.

762. **TEXTILE CHEMICALS**—Buying guide and reference book giving facts about Amalgamated Products, the fabrics on which they give best results, their proper application, and their chemical composition.—AMALGAMATED CHEMICAL CORP., Philadelphia 34, Pa.

766. **DU PONT PEROXIDE BLEACHING SYSTEMS**—New book illustrating and describing this continuous peroxide bleach system. Layouts and other information included.—E. I. DU PONT DE NEMOURS & CO., ELECTROCHEMICAL DEPT., Wilmington, Del.

769. **SURFACE TENSION DEPRESSANT** — The Booklet, "Mercerizing and Alkamerce—The Ideal Dry" which can be used as a wetting agent; a dye leveling agent, a penetrant in package dyeing.—MART PRODUCTS CORP., 1440 Broadway, New York, N. Y.

773. **TECHNICAL CHEMICAL DATA SHEETS**—Complete set for dyeing, printing and finishing operation, showing major operations, performance and advantages.—ONYX OIL & CHEMICAL CO., 190 Warren St., Jersey City 2, N. J.

774. **ROYCE TEXTILE CHEMICALS**—This booklet briefly describes the leading Royce products for textile processing printing, dyeing and finishing.—ROYCE CHEMICAL COMPANY, Carlton Hill, N. J.

KNITTING . . .

801. **THE WILDMAN SINGLEHEAD FULL-FASHIONED HOSIERY MACHINE** — Literature on request from the WILDMAN MFG. CO., Full-Fashioned Division, Norristown, Pa.

802. **REINER SIMPLEX MACHINE**—Illustrated catalog describes this double-knit machine as being a very popular unit for the glove trade, outerwear, lingerie, beach wear and other similar items.—ROBERT REINER, INC., Weehawken, N. J.

812. **CIRCULAR KNITTING MACHINES**—Interesting, informative and well illustrated is this six-page folder, just released, which describes this company's small diameter circular knitting machine.—H. BRINTON COMPANY, Kensington Ave., and M St., Philadelphia 34, Pa.

818. **MILTON LIGHT METAL BEAMS FOR EVERY APPLICATION** — Catalog 45-A describing Light Metal Trico Beams made in Standard and Special sizes plus Special Purpose Light Metal Textile Equipment.—MILTON MACHINE WORKS, INC. Milton, Pa.

823. **VARIABLE STRIPER**—Booklet available describing Supreme's complete line of automatic Variable Stripers and Pattern Placer machines. — SUPREME KNITTING MACHINE CO. INC., 105 Johnson Ave., Brooklyn 6, N. Y.

828. **THE KIDDE KNITTER**—Bulletin describing the newest in Raschel-type warp knitting machine and higher production attained with it.—KIDDE MANUFACTURING CO., INC., Bloomfield, N. J.

SEWING MACHINES . . .

912. **ELASTIC HEMMING AND INSERTING MACHINES**—Bulletin No. 153, illustrating and describing the improved high speed machine Style 992-5, for work on undergarments, dresses, pajamas, etc.—WILLCOX & GIBBS SEWING MACHINE CO., New York, N. Y.

924. **BUTT-TACKING SEWING MACHINE** — Booklet describes an operating installation of the Merrow single thread butt-tacking sewing machine. Gives performance data, and advantages of butt-tacking.—Write: THE MERROW MACHINE COMPANY, 25 Laurel Street, Hartford, Connecticut.

MATERIALS HANDLING . . .

1003. **CASTERS AND WHEELS**—192 pages, describing casters and wheels suitable for all types of industrial applications. Every mechanical engineer and purchasing agent should have this.—DARNELL CORP., LTD., Long Beach 4, Calif.

1004. **PITTSBURGH COLLAPSIBLE CARGO-TAINERS**—Stacked they lock in place and permit visible inventory; collapsed they rest in small area. Base permits entry by all types of lift trucks. Write for brochure MH-15.PITTSBURGH STEEL PRODUCTS COMPANY, Pittsburgh 30, Pa.

1006. **LANE CANVAS BASKETS** — 16 page illustrated booklet describing the Lane line of canvas baskets for textile use.—W. T. LANE & BROTHERS, Poughkeepsie, N. Y.

1007. **OVERHEAD HANDLING EQUIPMENT** — 56 pages of illustrations showing successful applications of monorail systems to meet every kind of handling problem.—THE AMERICAN MONORAIL CO., 13100 Athens Ave., Cleveland, 7, Ohio.

1008. **CASTERS AND WHEELS**—An illustrated booklet with complete specifications showing a complete assortment of Cotton Textile Casters.—THE COLSON CORP., Elyria, Ohio.

1010. **CONVEYOR KEY BOOK**—A guide to production "step-ups" now possible with modern conveying. Shows time-and-effort savings. Well illustrated with photos showing plant layouts and sketches showing where, how and why different types of conveyors are used for maximum results.—LOGAN CO., 1115 Franklin St., Louisville, Ky.

1011. **TEXTILE TRUCKS** — Booklet describing doff boxes, frames and trucks, yarn, waste, platforms, conditioning, steep lap fiber, utility trucks, etc. Uses and description.—EXCEL TEXTILE SUPPLY CO., Lincolnton, N. C.

1012. **"SERVES YOU RIGHT"**—is theme of succint review of forklift trucks, powered hand trucks and industrial towing tractors, with emphasis on proper planned materials handling systems, which can be obtained from CLARK EQUIPMENT CO., INDUSTRIAL TRUCK DIV., Battle Creek, Mich.

1013. **"A STORY OF TRACTOR TOOLS AND THEIR USE"**—Comprehensive illustrated guide effectively present in cartoon-style the many principal uses for this type of Equipment.—HYSTER CO., 2903 N.E., Clackamas St., Portland 8, Ore.

1025. **ELECTRIC HOISTS AND CRANES**—Booklets describing a complete line of Electric Overhead, Cab and Floor-Operated Traveling Cranes, and a similar complete line of Electric Hoists. All fully discussed with pictures and engineering diagrams.—SHEPARD NILES CRANE & HOIST CORP., Montour Falls, N. Y.

1027. **SINGLE-BEAM CRANES**—Bulletin No. 130 describing and illustrating the single beam type of overhead traveling crane.—SHEPARD NILES CRANE AND HOIST CORP., Montour Falls, N. Y.

1030. **CDF RECEPTACLES**—This 32-page catalog, R-11, profusely illustrated in color, shows Continental-Diamond's line of boxes, trucks, cans, barrels, baskets and trays. Complete description and specifications are given on each item. — CONTINENTAL-DIAMOND FIBRE CO., Newark 11, Del.

1032. **ELECTRIC CHAIN HOISTS**—Bulletin 852 describing Robbins & Myers Type "JC" Electric Chain Hoists. Capacities 500, 1000 and 2000 pounds.—ROBBINS & MYERS, INC., Hoist & Crane Div., Springfield, Ohio.

MISCELLANEOUS . . .

1101. **AUTOMATIC BOBBIN REFINISHER** — A descriptive bulletin illustrating and describing method of refinishing threwing bobbins on a production schedule.—J. M. NASH COMPANY, 2300 N. 39th St., Milwaukee, Wis.

1102. **BALING PRESSES**—An illustrated folder describing this manufacturer's complete line of balers for all materials. Both Downstroke and Upstroke models. —ECONOMY BALER CO., Ann Arbor, Mich.

1103. **UNBRAKO SCREWS**—Illustrated 16-page booklet No. 570 gives data on Unbrako hollow set screws, with knurled point, self-locking features. Includes miscellaneous screw and locking nut data. —STANDARD PRESSED STEEL CO., Jenkintown, Pa.

1107. **AUTOMATIC QUILL POLISHER** — Bulletin describes production machine for refinishing loom bobbins. Tells how quills can be kept in perfect condition at minimum labor cost.—J. M. NASH CO., 2360 N. 30th Street, Milwaukee 10, Wis.

1108. **FABRICATION OF U. S. STAINLESS STEELS**—136-page book covering use of stainless steel in textile equipment from cutting to cleaning. Includes corrosive-resistance tables for chemicals. — CARNEGIE-ILLINOIS STEEL CORPORATION, Pittsburgh, Penn.

1111. **BRUSHES**—A 26-page booklet is now available which describes and illustrates this manufacturer's line of brushes for the textile industry. — GASTONIA BRUSH COMPANY Gastonia, N. C.

1112. **THE RANDOM WEB PROCESS**—Bulletin No. 101 describes the Rando-Webber and Rando-Feeder machines, and discusses the origin and development of the Random Web process which produces a non-oriented web suitable for processing into felts, wadding, heavy mats and non-woven fabrics on a continuous basis. Engineering data and cut-away diagrams.—CURLATOR CORPORATION, Textile Division, 865 Blossom Rd., Rochester, N. Y.

1113. **MACHINE KNIVES** — Catalog and price sheets describing this company's line of knives for use on textile machinery.—TAYLOR-STILES & CO., 21 Bridge St., Riegelsville, N. J.

1115. **TEXTILE WRAPPING MACHINES**—Brochure describing automatic wrapping machines for various types of textile products, including the new Hayssen V-Type Underfold, most protective package made.—HAYSSEN MANUFACTURING CO., Sheboygan, Wisconsin.

1117. **CUSTOM MADE THREAD GUIDES**—Illustrated booklet describing uses and physical properties of the "AlSiMag" line of Thread Guides. Advantages fully discussed with picture and specifications of each type.—AMERICAN LAVA CORP., Chattanooga 5, Tenn.

1122. **BALING PRESSES**—Bulletins available describing this company's line of motor-driven and hydraulic baling presses for finished-goods, textile fibers, wool, and waste of all kinds.—LOOEMANN BROTHERS CO., 3150 West Burleigh St., Milwaukee, Wis.

1123. **CHROMIUM PLATING**—New booklet tells how Walhard engineered hard chromium plating service works for industry. Walhard's capacity to produce, controlled quality, and economical operation are discussed along with pictures of the operations. — WALTON AND LONSBURY, Attleboro, Mass.

MAY, 1953

Please send, without obligation, additional information on New Equipment and booklets described (give Key numbers) .....

.....

.....

Please send more information on advertisements (give Page numbers)

.....

.....

Name ..... Position .....

Company Name .....

Address .....

City ..... State .....

◀ Handy Return Card

USE THIS OPPORTUNITY TO INFORM YOURSELF OF CURRENTLY AVAILABLE LITERATURE DEALING WITH MACHINERY, EQUIPMENT AND SUPPLIES FOR TEXTILE MILLS, FILL OUT THE ATTACHED CARD TODAY.

News in Brief

(Continued from page 93)

the Netherlands, Sweden, Belgium, Denmark, Norway, and West Germany on cotton promotion plans. A meeting with Italian cotton leaders is still tentative.

Navy Clothing Factory Closed. The Navy stopped manufacturing enlisted men's clothing in the Brooklyn factory on April 30. Clothing requirements will henceforth be purchased from commercial clothing manufacturers, on contract.

Neck, Shin, and Thigh Armor. A Philadelphia sportswear company is working on experimental models of armored collars, shin guards, and thigh guards. The firm has already produced the armored vest and armored groin protectors for the armed forces.

Textiles in the West. Establishment of a major textile industry in the West, which would provide employment for thousands and create a new market for the region's vast raw material reserves, was featured as the theme at the 123rd national meeting of the American Chemical Society in Los Angeles on March 14.

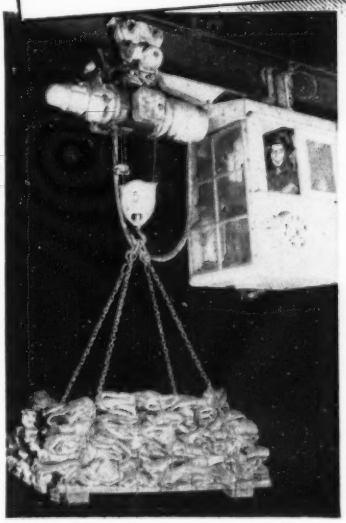
G.E. Praises Idea Exchange. The trade and popular press of the nation has been singled out as a "major factor in determining our high standard of living" by J. E. Weldy, marketing manager of the Carboloy Department of General Electric Company. Mr. Weldy stated that the "free exchange of ideas and information has always been a vital factor in the business life of this nation" and added that "this would be an impossibility without the cooperation and efforts of the press."

Seasonal Wool Gains Up. Wool consumption in 11 major countries, which consume two-thirds of the world's wool clip, showed an improvement of 12 per cent during the last quarter of 1952. This is more than two times the normal

SHEPARD NILES
Floor-Operated Hoist

Operator mainly occupied with other duties. Hoist used for fast, efficient handling of relatively short hauls.

WHICH HOIST is RIGHT FOR YOUR JOB?



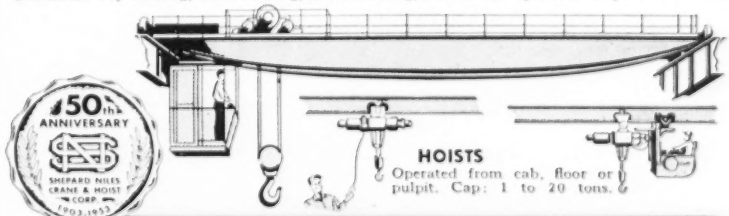
SHEPARD NILES
Cab-Operated Hoist

Operator in cab moves loads along at high speeds—occupies best vantage point for spotting or stacking materials.

Choosing the hoist that's right for your job calls for expert advice.

Let the Shepard Niles representative in your area guide you in your choice. He specializes in through-the-air handling—can help you select the hoist that best fits your job. Write Shepard Niles today for latest bulletins describing both types of hoists—and ask to have a representative stop by your office.

CRANES
Overhead: Top running, inner running, under running, floor or cab operated. Cap: 1 to 450 tons.



HOISTS
Operated from cab, floor or pulpit. Cap: 1 to 20 tons.

SHEPARD NILES
CRANE AND HOIST CORPORATION
1925 Schuyler Ave., Montour Falls, N. Y.

THE STARCH

USED IN A

WELL BALANCED

WARP SIZE

REFLECTS THE INTEGRITY
OF THE PRODUCER

CLINTON CORN STARCH

HAS THE QUALITY WHICH

MAKES IT

A SOUND BASIC INGREDIENT

FOR

BETTER SIZING

AND

WEAVING

CLINTON

CLINTON FOODS INC.

CORN PROCESSING DIVISION

CLINTON, IOWA

SINGLETON'S...
THE APRON OF CHOICE
FOR
SACO-LOWELL
SPINNING AND ROVING

Singleton's New-Type, Resin-Reinforced Draft Horse Leather Aprons are available either Endless or Open. These improved aprons now have more than 400% greater resistance to abrasion than ever before.

Two Southern mills just completing six-months tests with Singleton Treated Leather Aprons have just reported a 50% reduction in "ends down." (1st mill on Gwaltney, 2nd mill on Dual Aprons). A third mill reports that one set of Singleton Treated Leather Aprons outlasted two sets of rubber aprons.

Singleton Aprons do last longer—they have a longer **effective yarn life**—a more lasting control over the evenness of yarns produced—than any other apron made today.

To test these better-than-ever Singleton Aprons for yourself, write, wire or telephone today to the Company, or to the representative nearest you.

RUSSELL A. Singleton & SONS

BLANCO, TEXAS

Southern Manager — Tel. 2-2682
GEO. W. SINGLETON, P. O. Box 1496, Greenville, S. C.
S. C. Representative — Tel 2-2682
GEO. W. SINGLETON, JR., P. O. Box 1496, Greenville, S. C.
N. C. Representative
HAMNER SALES AGENCY, P. O. Box 267, Gastonia, N. C.
Ala. and Ga. Representative
INDUSTRIAL SUPPLIERS, INC., LaGrange, Ga.

seasonal gain. The Wool Bureau announced the gains in an analysis of world wool trends based on a report now being issued by the Commonwealth Economic Committee.

On Cotton Supply for 1953. Secretary of Agriculture Benson has issued a statement regarding the cotton situation. "The good cotton crops of the past two years have supplied the needs for domestic consumption and exports and they have also rebuilt reserve supplies. It will therefore not be necessary, or desirable, for farmers to produce as big a crop this year. A production of 12 to 12.5 million bales now appears to be desirable in 1953."

Israeli Weave Mill. Among the four new projects approved last October by the Israeli Investment Centre was a weaving mill.

No Union at Courtaulds (Ala.). An election was held under the auspicies of the National Labor Relations Board at the plant of Courtaulds (Alabama) Inc., Le Moyne, Ala., on March 12. The petitioning unions and the votes received were as follows:

Textile Workers Union of America, C. I. O. 47 votes
Pulp, Sulphite and Paper Mill Workers, A. F. L. 14 votes
International Brotherhood of Electrical Workers, International Chemical Workers, International Association of Machinists, and Teamsters, Chauffeurs, Warehousemen and Helpers, A. F. L., petitioning together, 5 votes.
66 votes total
No union, 143 votes

Textile Research at M. I. T. A four-week special summer program in the principles of textile research will be given from July 6 to July 31 during the 1953 summer session at the Massachusetts Institute of Technology. The program will deal largely with the role of fundamental research in textiles as it relates to the interpretation and handling of laboratory findings.

Cotton-Nylon, Dacron Fabrics. A cotton-nylon denim for heavy duty work clothes and utility play clothes markets has been announced by Cone Mills. The Cone denim concentrates the nylon in the warp which is 25% nylon, 75% cotton. A Dacron and combed cotton fabric developed by Cone is used successfully in an Oxford shirt that will dry overnight and requires no pressing.

Materials Conference. Twenty leading industrial research engineers and government scientists will comprise an advisory committee to formulate a program for the first Basic Materials Confer-

Do you get
10 YEARS'
SERVICE
from your
take-up roll
covering?

Many mills report using TEXALOX take-up roll covering by CARBORUNDUM for ten years continuously—*without replacement or showing evidence of wear.* Do you get that much service from the roll covering you're using now? Does it give you all the other valuable advantages TEXALOX covering offers? For example:

- **NEVER GETS SLIPPERY OR GUMMY**—outlasts other materials.
- **DOESN'T SHED**—as other paper coverings do.
- **CAN'T RUST**—as metal coverings do.
- **PREVENTS CHAFE AND CUT MARKS.**
- **WON'T WRINKLE OR LOOSEN.**
- **RESISTS OIL AND GREASE**—and never accumulates them.
- **NEVER LOSES** its even, gentle grip on the fabric.
- **ALWAYS DELIVERS** definite lengths of material.

If your present roll covering doesn't offer you these advantages, you'll want to try TEXALOX roll covering—created expressly for the textile industry by CARBORUNDUM. There is a TEXALOX roll covering for each textile type, from sheerest nylon to heaviest duck. It's easy to apply. Try it on your looms—see what an improvement it is over old style coverings. We'll send you a sample length, free of charge. Ask your CARBORUNDUM Distributor—or write Dept. TW 82-31.

TEXALOX
TRADE MARK
SURE-GRIP TAKE-UP ROLL COVERING
by CARBORUNDUM

"Carborundum" and "Texalox" are registered trademarks which indicate manufacture by The Carborundum Company, Niagara Falls, New York

82-31

CREATIVE TALENT?

Did you know that a financial organization such as Talcott can help you create sales and profits?

Yes, it's true.

First—*Factoring* relieves you of credit and capital problems. You can concentrate on production and sales.

Second—*Talcott Factoring* goes beyond the routine. You get expert, experienced counsel on financial matters. Our extensive contacts may help you broaden your markets.

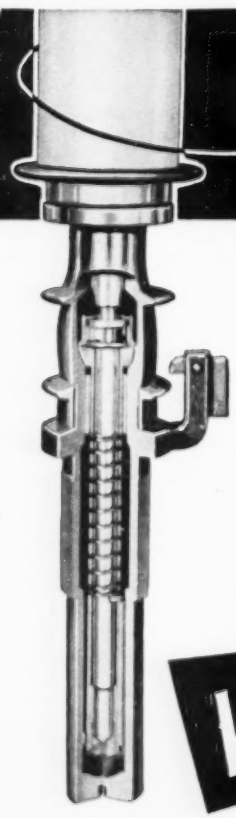
We'd be glad to spell these *extras* out to you. Simply write or call Department N in our New York office.

James Talcott, Inc.

Since 1854

225 Fourth Ave., New York 3, N. Y.

ORegon 7-3000



WICACO ROLLER BEARING SPINDLES

first in Quality since 1868

WICACO Roller Bearing Spindles, incorporating the SKF roller bearing type of bolster, are the finest spindles your money can buy, developed to perfection through the many years since Wicaco first introduced Roller Bearing Spindles to the Textile Industry.

Many textile mills have found that Wicaco Roller Bearing Spindles cost no more than ordinary ones, and reduce operating costs. We will design them to meet your particular requirements. Write today for quotations without obligation.

WICACO SPINDLE OILING MACHINE

The WICACO SPINDLE OILING MACHINE guarantees proper lubrication for all twisting spindles, flushes out the old oil and replaces it with fresh clean oil in one simple operation. Saves time, labor, power. Order yours today, or send for descriptive folder NOW.

WICACO

WICACO MACHINE CORPORATION

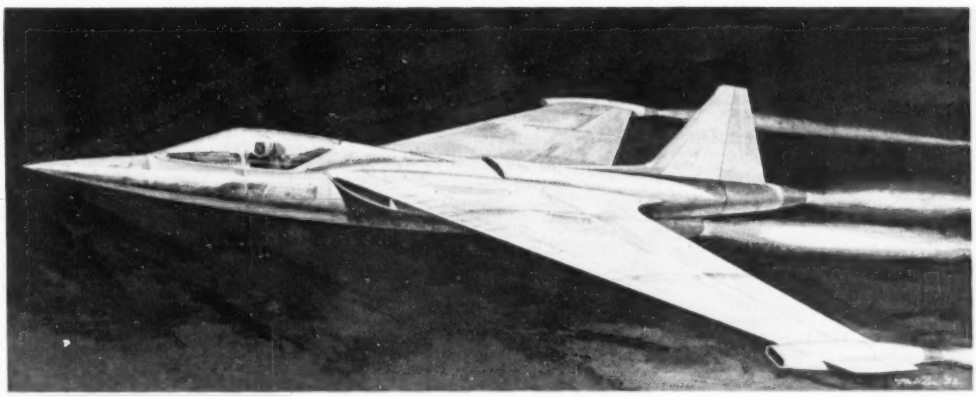
Designers and Manufacturers of Precision Machinery and Parts

WAYNE JUNCTION — PHILADELPHIA 44, PA.

AMERICAN SUPPLY CO.
1420 Broad St.
Central Falls, R. I.

RALPH GOSSETT & CO.
Suite 204, Crawford Bldg.
Greenville, S. C.
and P. O. Box 6052
Charlotte, N. C.

OTHER AGENTS in FOREIGN COUNTRIES



Glass Fabric Skins for Aircraft of the Future

Glass fabric, plastic laminated, is being seriously considered for use as aircraft skins by Northrop Aircraft Inc., according to a report. The typical aircraft fabric-plastic skin would be a woven glass fabric laminated with phenolic resins or silicones. This structure has a favorable strength-weight ratio at temperatures near 500 F and weighs less than other skin materials.

Northrop tests show that phenolic - resin - impregnated glass fabric laminates with a tensile strength of 80,000 psi at room temperature maintain a strength of 35,000 psi after 100 hours exposure at 500 F. The loss of tensile strength amounts to 56%. Other aircraft skin materials lose up to 80% of their tensile strength under similar conditions.

Basis for considering the glass-plastic is a problem of friction as aircraft achieve faster speeds. At 1300 mph the skin temperature is 260 F; at 2600 mph, skin temperature exceeds 1,000 F.

Molded fabric material has a low coefficient of expansion, and localized dimensional changes will be less severe in fabric skin than in other materials.

The glass fabric aircraft which some engineers are now discussing and working on may appear something like the accompanying illustration: It will have glass fabric wings, ailerons, stabilizers, and fuselage. Glass fabric will be fastened with glass rivets to titanium and stainless steel low-density structural members. The plane will fly in excess of 2,000 mph.

ence which will be held in June in New York concurrently with the first Exposition of Basic Materials for Industry. Heads of 21 major companies have formed a board of sponsors for the exposition.

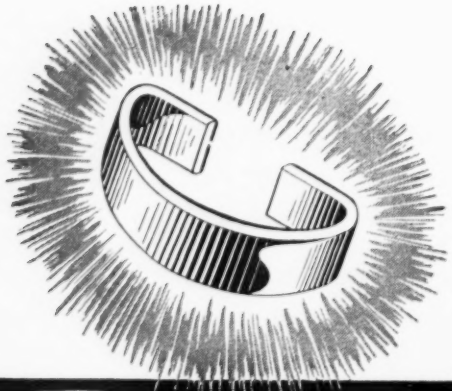
Carpet Company Makes Glass Mats. A uniform glass fiber mat in weights from two ounces to ten ounces per square foot and glass fiber cloth in widths up to 150 inches are in limited production at Bigelow-Sanford Carpet Co., Inc. According to the Company, these mats are the first available in weights above three ounces per square foot. Samples are available to industrial users.

Export Rate Fixed for Rags. The emergency export rate on transportation for rags shipped from U. S. Atlantic and Gulf ports to the Far East, formerly issued to expire on February 28, 1953, has been obtained on a permanent basis. The permanent rate is: "Rags, in bales, for reclaiming purposes, viz: cotton, wool, rayon, nylon. Rate—$30.00 per 2000 lb or 40 cubic feet contract basis." The rate applies to the ports of Yokohama, Kobe, and Osaka.

Tip on Laying Flooring. Don't lay hardwood flooring immediately after it is delivered at the building. Store it for a few days in the building in which it is to be laid. The ideal condition is a thoroughly dry building. Where that condition exists, allow at least three days for the normally absorbed moisture in the flooring to evaporate. This precaution should prevent the possible later development of unsightly cracks between joints. Where the ideal condition does not exist, a few days delay in laying kiln-dried northern hard maple flooring will acclimate it to moisture conditions in the building. The foregoing comments are from a bulletin issued by the Maple Flooring Manufacturers Association.

New Zealand Sheep. A further increase in New Zealand's sheep and lamb population during the 1951-52 season is noted. Total flocks are estimated at 35.3 million, an increase of half a million or 1½ per cent, a new record level.

Tax Shelter. Family security and the security of family owned business have been vastly undermined by the Federal tax structure, according to a research study, "Tax Shelter for the Fam-



DARY
Ring Travelers

WELCOME TRAVELERS!

The welcome sign for Dary Ring Travelers has been up in spinning and twisting rooms for well over 50 years!

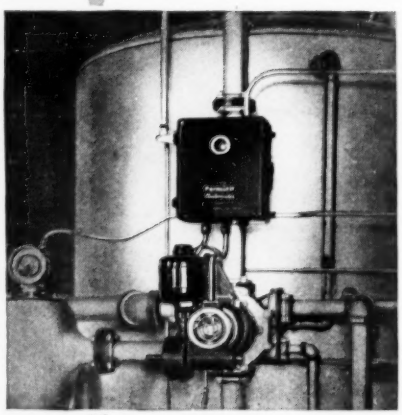
Dary users know they can depend on steady performance regardless of the tough tests they give Dary Travelers.

So, welcome your Dary Ring Traveler man the next time he stops by!

THE DARY RING TRAVELER CO.
TAUNTON, MASSACHUSETTS

LINDSEY I. PHILLIPS, TREASURER, TAUNTON, MASS.
JOHN E. HUMPHRIES, BOX 843, GREENVILLE, S. C.
JOHN H. O'NEILL, BOX 720, ATLANTA, GA.
JAMES H. CARVER, BOX 22, RUTHERFORDTON, N. C.
CRAWFORD RHYMER, BOX 2261, GREENVILLE, S. C.

IN goes ↓ *Permutit Q*



OUT ↓ *comes more*
SOFT WATER

Change to Permutit Q and your present water softener will do a bigger, better job. This remarkable new zeolite permits higher flow rates, softens more water in less time, requires less salt for regeneration.

And while you're at it, you can add to your savings in time and money with automatic controls! They can be quickly and easily installed on your present water softener . . . making regeneration fully automatic and assuring maximum efficiency. This way you'll get a constant supply of clear, soft water at a savings in costly man-hours of labor.

For further information, write to: THE PERMUTIT COMPANY, DEPT. TI-5, 330 WEST 42ND STREET, NEW YORK 36, NEW YORK, or to Permutit Company of Canada Ltd., 6975 Jeanne Mance Street, Montreal.

PERMUTIT®

WATER CONDITIONING & ION EXCHANGE HEADQUARTERS

ily," prepared by William J. Casey, New York lawyer, and J. K. Lasser, CPA and tax expert. The study has been published by Business Reports, Inc., 225 West 34th Street, New York, N. Y.

Hosiery Heel Patented. The U. S. patent office has granted a patent to Frank W. and Richard H. Kinley for a hosiery heel design. Owners of the patent are officers in the Kinley Hosiery Mills, Inc., York, Pa.

Flame Resistant Coatings. New flame resistant coatings made from materials called "mastics" may be applied like plaster or mortar. The coatings protect wood, fiberboard, and metals from fire and heat, have good resistance to abrasion, erosion, impact, and weathering, inhibit corrosion of certain metals, prevent condensation, and deaden sound. The mastic does not support mildew, a factor which should make the material useful in weave rooms. The new coating was described by John C. Zola at a meeting of the American Chemical Society, recently held in New York City.

Survey of Orlon Suits. Consumer satisfaction with Orlon is indicated by the fact that more than 90 per cent of the purchasers surveyed say that they are willing to rebuy, according to a recent survey conducted by the Du Pont Co. Twelve hundred of the suits, in a Dan River fabric of 60 per cent Orlon and 40 per cent cotton, were sold in the East, South, and Southwest.

Explanation

The statement "Despite doubling, unevenness increases throughout the manufacturing processes" appearing on page 98 of the March, 1953, issue of TEXTILE INDUSTRIES as a highlight of the article "Research and Quality Control Pay Off" had reference, of course, to short term unevenness.

Also, under Fig. 20, page 107, the words "fibers per square *foot* of cylinder" are used twice. These should have been "fibers per square *inch* of cylinder."

NEW Equipment AND MATERIALS

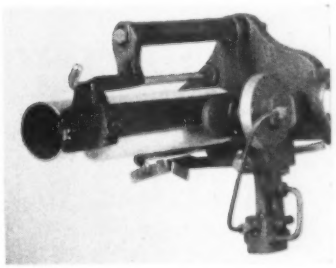
Other items are described on pages 99, 101, 103

More Accurate Cloth Guiding with New Air Guider Valve

The new Hetherington Superair cloth guider is now equipped with a valve designed to reduce the time interval that the guider rolls are allowed to open, providing more accurate guiding.

This shorter time interval which reduces the oscillation or side-to-side movement of the cloth is made possible by placing the valve at the end of a 4-inch right angle stem instead of close to the bearing as is done usually.

Another feature of the valve is air economy. The valve is practically air tight and operates on an Oilite bearing 2 inches long.



Hetherington Superair cloth guider.

In addition to using the valve on

Are You Getting a Fair Day's Work for a Fair Day's Pay?

As Production Engineers we specialize in the utilization of

LABOR — EQUIPMENT — MATERIAL

Our list of clients reads like the Blue Book of American Manufacture, and in our files are many expressions as to our service and results accomplished, like the following:

"We have employed on various occasions the services of American Associated Consultants. We have always found their work satisfactory."

A LARGE KNIT GOODS CONCERN

Write for a free copy of "Labor and Management Benefit by Industrial Engineering Principles," and our booklet "A Fair Day's Pay and in return A Fair Day's Work".

AMERICAN ASSOCIATED CONSULTANTS, Inc.

D. 3. KEOGH, President
J. J. SKELLY, Vice Pres. and Gen. Mgr.
250 PARK AVENUE
NEW YORK 17, N. Y.

GRANT BUILDING
PITTSBURGH, PA.

H. B. CRAFT, Vice President
in Charge of Southern Operations
30 CAMDEN ROAD
ATLANTA, GA.

ORIGINAL and GENUINE
"The Leather with the hair on"
Bondaron
REG. U. S. PAT. OFF.

Stands for

QUALITY

in

TEXTILE LEATHERS

—The kind of Quality that means *real Economy* over a period of years . . . 3 to 5 times longer life . . . fewer interruptions in production . . . fewer seconds in materials!

—Quality that is being proved daily in hundreds of mills . . . against *all* competition.

ORIGINAL and GENUINE
Bondaron
Reg. U. S. Pat. Off.
"The Leather with the hair on"

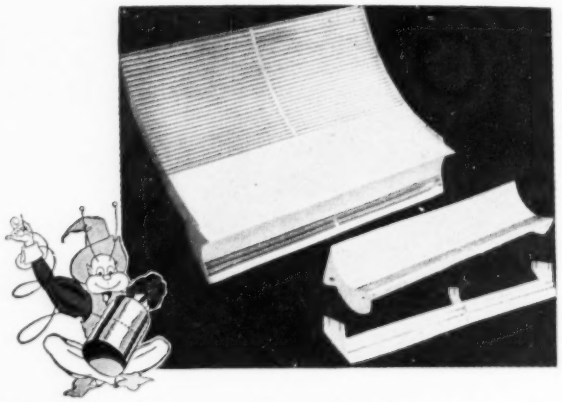
Textile Leathers

cost slightly more than ordinary leather ---are *worth* infinitely!

Write for Booklet 303 listing the following Bondaron, Bondural and Bondex Leather Products—

Check Straps	Flat Belting	Oak Tan Slabs
Lug Straps	Spinner Belting	Lace Leather
Harness Straps	Twister Cots	Valve Leather
Picker Straps	Condenser Aprons	Back Straightenings
Spindle Straps	Worsted Aprons	Filleting Leather
Shuttle Straps	Bunters	English Sheep Skins
Loom Pickers	Picker Leathers	Persian Sheep Skins
Cone Belts	Apron Leathers	English Roller Bends
Round Belting	Belting Butts	English Calf Skins

CHARLES **Bond** COMPANY
617-623 ARCH STREET PHILADELPHIA, PA.
Manufacturers of Textile Leathers for Nearly Half a Century



Check Your Card Screens!

You can't produce top grade products without precision fitted Screens. SIMS is equipped to repair your re-usable equipment or to furnish you with replacement parts. Check your equipment now . . . then call SIMS.

REPLACEMENT PARTS available from stock. Spinning Cylinders. Spinning Cylinder Heads and Arbors. Card Screens. Picker Screens.

Sims METAL WORKS
WEST POINT, GA.

MODERN *Custom Cut* FERGUSON GEARS

FOR OVER 25 YEARS A WATCHWORD IN SERVICE AND QUALITY

FERGUSON GEAR COMPANY
•GASTONIA, NORTH CAROLINA
Phone 4-2626

new guiders, the manufacturer has arranged to supply it for use on guiders already in operation.

Guider, Roll and Service Co., P.O. Box 3747, Peninsula Station, Daytona Beach, Fla.

For additional data, request item E-109, using Handy Return Card on page 206.

Save Time in Blending Samples of Cotton

The mechanical cotton blender for testing laboratories developed by the Research and Testing Division of the Cotton Branch, Production and Marketing Administration, U. S. Department of Agriculture, and described in TEXTILE INDUSTRIES for March, 1952, page 123, is now being manufactured for sale.

Eight 10-gram samples can be blended in about one hour with this new machine, whereas hand methods require 20 times as long for comparable weight samples.

Custom Scientific Instruments, Inc., P. O. Box 170, Arlington, N. J.

For additional data, request item E-601, using Handy Return Card on page 206.

Mueller Narrow Fabric Looms Available in United States

Narrow fabric looms manufactured by Jakob Mueller of Frick, Switzerland, are now available in the United States.

Standard looms are efficient on rayon, cotton, silk or for elastic tapes. Spacings from ¼" to 12" wide are available at 6 to 60 spaces per loom, and speeds of up to 230 picks per minute can be obtained. Battens of all types for up to four shuttles are available.

The looms can be equipped with a cam motion for up to eight harnesses, with dobbies up to 32 harnesses or for Jacquard heads of all types.

Outstanding features of the machines are: Variable speed regulator for speed adjustments according to type of material to be woven; automatic, instantaneous warp stop motion enables quill change in most convenient position of shuttle; on some models two different weaves can be made simultaneously; automatic let-off motion insures constant and uniform warp tension. A special loom for the production of velvet ribbons features an improved cutting mechanism. The firm has also developed a high speed warper for narrow fabrics suitable for all types of yarn.

Ernest L. Frankl Associates, 22 East 40th St., New York 16, N. Y.

For additional data, request item E-113, using Handy Return Card on page 206.

Dope-Dyed Protein Fiber for Use in Blends

"Merinova," the protein fiber manufactured in Italy by Snia Viscosa, is now being marketed in the United States and Canada.

The dope-dyed fiber produced in a range of twenty colors is not designed to be used alone but as a blend with wool, nylon, perlon, cotton, viscose, and the new fibers. It imparts a wool-like hand and a pleas-

NEW Equipment AND MATERIALS

Want More Information on These Items?

Use Handy Return Card on page 206, giving Key Number (E-500, etc.) which appears after the name of the supplier of the item in which you are interested. Or, if you prefer, write supplier direct.

The Anco **Pressure Relief Valve** for water, oil or chemicals under both low and high pressures has only one moving part, is light in weight, and is easier to install because it requires less space. Despite changes in demand, it maintains proper pressures. Protects pumps by allowing flow through them.

Anco, Inc. (E-208).

Trial-lot quantities of **acrylic acid,** useful in preparation of warp sizes and finishing agents, are offered as a 50 per cent solution in water. The product is stabilized by the addition of small amounts of hydroquinone.

American Cyanamid Co. (E-209).

Four new small **pipe line filter** models, designed for installations requiring only 40 psi maximum pressures for compressed air or gas, feature one-bolt accessibility for quick inspection and cleaning without removing filters from the line.

Dollinger Corp. (E-210).

A plastic pressure-sensitive **labeling tape,** known as "Labelon," can be written on without ink, pencil, or crayon—all that is needed is a sharp point. Pressure of instrument causes writing to appear beneath a protective outer coat of transparent plastic.

Labelon Tape Co., Inc. (E-211).

A new **check valve** has a valve seat formed of two hardened steel pieces which are designed, ground, and lapped for long life. Consisting of seven parts in all, it has only one moving part. Termed ideal for use with accumulators, the valve prevents reversal of flow of air, oil, water or chemicals.

Anco, Inc. (E-801).

A **portable power plant,** completely controlled by "push buttons," can operate pumps, compressors, generators, hand tools, and other machinery which can be transported from job to job. Output, 1500 watts. Can operate on either 110-volt current or an independent 6-volt system.

Surgie Equipment Corp. (E-802).

Business machines that automatically classify, compute, and address by high speed television techniques from self-coded, typed cards have been developed for use in the publishing, insurance, and statistical fields, as well as for general industrial and commercial use.

The Kybernetes Corp., Div. of the Self Winding Clock Co. (E-803).

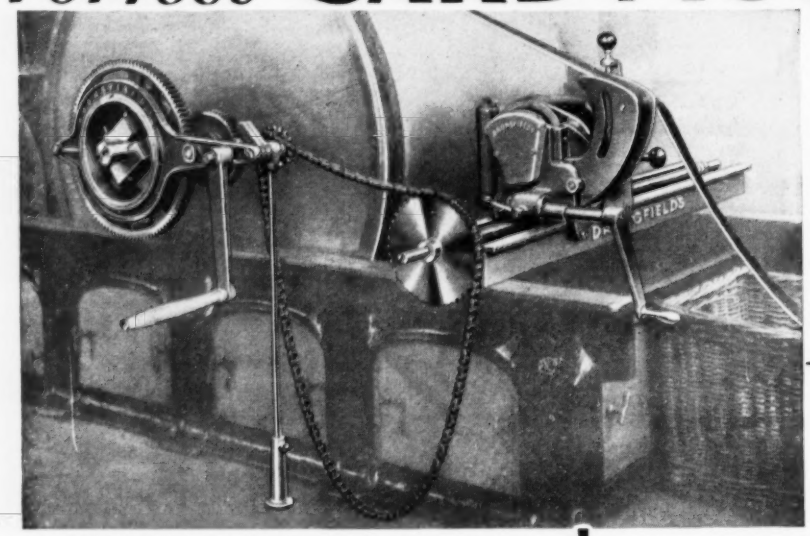
Industrial type **television camera systems** of the low-priced, closed circuit type are being marketed for remote viewing of dangerous or inaccessible locations and of confidential matter like signatures.

The Kybernetes Corp., Div. of the Self Winding Clock Co. (E-804).

Sturdy, corrosion-resistant **fiber glass tanks** are now being built to order in all wanted sizes from the smallest possible up to a maximum of 12-foot length or width by 4-foot depth, or 12-foot length and width.

Laminex Corp. (E-805).

Perfect CARD MOUNTING



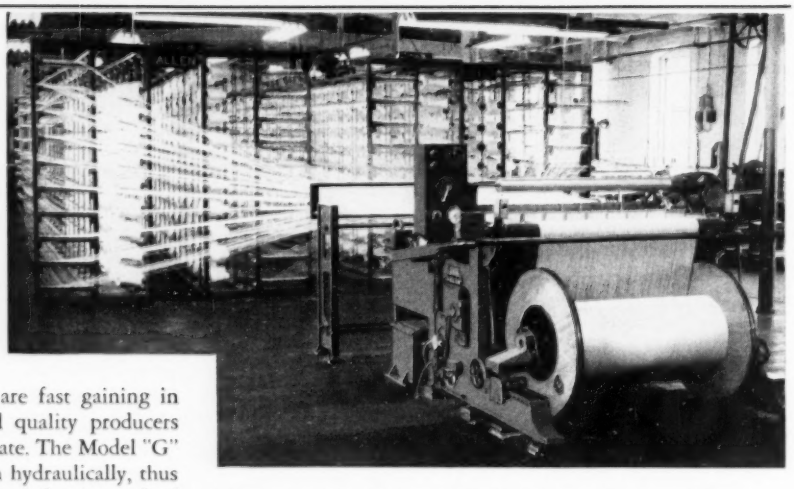
for
COTTON
WOOLLEN
WORSTED
WASTE
ASBESTOS
CARDS

Card Mounting Machine Nº 220 with Double Purchase Jack *for* clothing Card Cylinders and Doffers

SOLE AGENTS FOR DRONSFIELD'S MACHINERY:—
JOHN HETHERINGTON & SONS INC.
N. MARIETTA ST. EXT., GASTONIA, N.C.

DRONSFIELD BROTHERS LTD · OLDHAM · ENGLAND

PRODUCTION INCREASED-- QUALITY UPHELD with Allen Hi-Speed WARPING UNIT



Allen high speed warping installations are fast gaining in popularity because they are high speed quality producers with great flexibility and are easy to operate. The Model "G" Warper controls density and end tension hydraulically, thus delivering larger warps of even and equal density and of uniform tension at absolute constant yarn speed. Standard heavy duty units are manufactured to accommodate beam heads up to 40" diameter. The magazine cone creel, because of its many exclusive features, has great productive capacity and can be furnished for any type yarn or size of package. Inquiries on this or other Allen equipment, are invited.

This typical installation at the Manchester Narrow Fabrics Company, Manchester, N. H., features the ALLEN Model "G" Warper with Intermediate Eyeboard Stand, and the ALLEN 1000-Active End Magazine Cone Creel. The unit is used in producing quality venetian blind tapes.

Allen Warper COMPANY
SUCCESSORS TO WAMESIT WARPER CO.
40 CHURCH STREET, LOWELL, MASSACHUSETTS

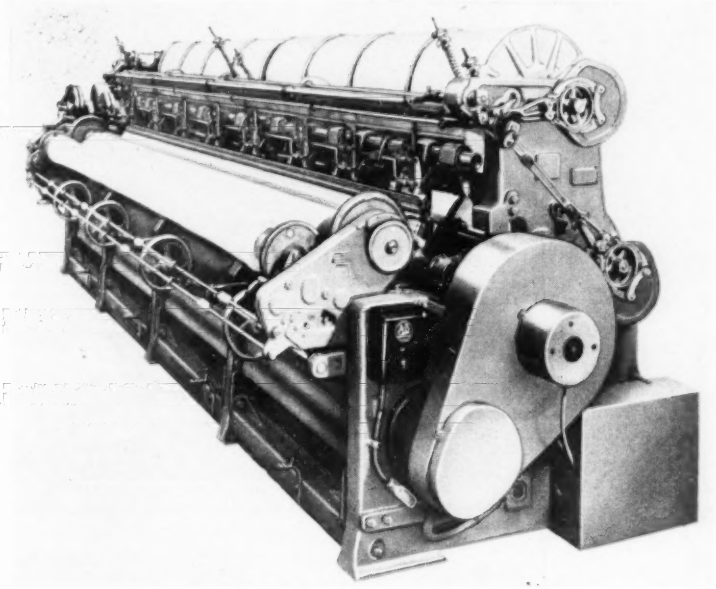
Manufacturers of Quality WARPERS · BEAMERS · BALLERS · COMBS · CREELS · TABLE WARPERS and all WARPING EQUIPMENT. Replacement parts for SACO-LOWELL · ENTWISTLE and ALLEN WARPERS

ing appearance to fabrics.

The fiber has practically the same bleaching and dyeing characteristics as wool and does not require special attention in processing. Excellent fastness to light and washing, bleaching, carbonization, and perspiration, crease and abrasion resistance are its properties.

Snia Viscosa, 689 Fifth Ave., New York, N. Y.

For additional data, request item E-121, using Handy Return Card on page 206.



Reiner Model RT-6 tricot knitting machine.

Improved 2- or 3-Bar Tricot Knitter

A new and improved tricot machine, known as Model RT-6, is not only a speedier one but also one with a high quality yield ratio.

Automatic beam feed, positive take-up, quick stop and start, fully automatic lubrication and other features are combined with lighter knitting elements, smoother motions for higher speeds, larger cams and cam rollers, and smoother guide bar action, all tending toward sustained high speed production with assurance of highest quality fabric.

Improvements in beam feeding device reduce maintenance to a minimum. Redesigned guide bar hangers reduce wear and vibration of these bars, and they also insure a freely running yarn sheet without chafing.

For finer needle adjustment, completely new thrust bearings were designed, which have more surface contact and stay in better alignment. These units are also connected with the automatic lubricating system.

The RT-6 model is available in all standard gauges as a 2- and 3-bar machine.

Robert Reiner, Inc., Weehawken, N. J.

For additional data, request item E-106, using Handy Return Card on page 206.

Ceramic Thread Guides with Areas Metallized for Attachment by Soldering

AlSiMag thread guides with specific areas metallized for attachment by soldering are available, permitting the firm attachment of small ceramic inserts in places where a smaller guide can increase production speed.

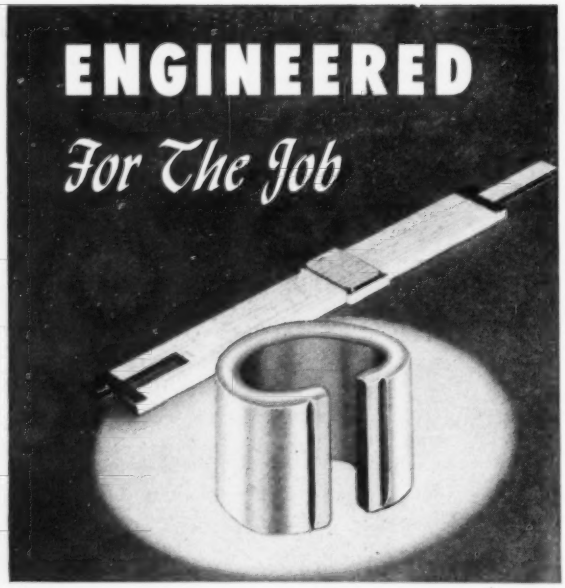
These ceramic guides have such extremely long life that many mills

The EMBLEM OF QUALITY METAL SHIELDS
For Spools and Bobbins

Anderson Shields are dependable protection against chipping, splitting, and breaking of spools, bobbins, and paper caps. Even the most minute details are carefully worked out to make Anderson the highest in precision, the smoothest in finish, the best in performance. The Anderson Emblem is your assurance of the finest shields you can buy.

Insist on Anderson when you order metal shields regardless of when you buy spools and bobbins.

TEXTILE SHIELD CO., INC.
J. N. ANDERSON, Treasurer
LAWRENCE, MASS., U. S. A.



CARTER TRAVELERS

Whatever the yarn — there is a CARTER TRAVELER specifically engineered to give smooth running work, long trouble-free performance with less wear on expensive rings. Every shape, size and weight has been developed with a background of years of experience in the heart of the modern textile industry.

Call your CARTER salesman for the scientific solution of any traveler problem.

CARTER TRAVELER COMPANY
DIVISION OF
A. B. CARTER, INC.
GASTONIA N. C.

REPRESENTATIVES

R. A. Haynes, Special Representative	114 W. Fifth Ave., Gastonia, N. C.
W. L. Rankin	501 S. Chester St. Gastonia, N. C.
P. L. Piercy	128 Hudson St. Spartanburg, S. C.
J. R. Richie	3014 Lewis Farm Road, Raleigh, N. C.
J. W. Brown	P. O. Box No. 560, LaGrange, Ga.
J. K. Davis	P. O. Box No. 129, Auburn, Ala.
C. E. Herrick	44 Franklin St., Providence, R. I.
Hugh Williams & Co.	47 Colborne St., Toronto 1 ,Canada

For the DEPENDABILITY You Seek
we recommend **PUMPS** *"by Aurora"*

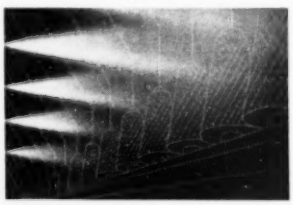
Capacities to 4,000 G.P.M.
Heads to 300 Ft.
PUMPS "by Aurora"
For Every Purpose
Type OD Horizontally Split Case, Double Suction, Single Stage Centrifugal Pump
WRITE for BULLETIN 105
The Type OD PUMPS
— for general water supply for municipalities, industries, office buildings, institutions — also — for handling liquids, chemical solutions, oils, etc. in industry.
APCO TURBINE-TYPE PUMPS
— ideal for "1001" duties where small capacities and high heads predominate. Get acquainted.
Write for CONDENSED CATALOG "M"

DISTRIBUTORS IN PRINCIPAL CITIES

AURORA Always PUMPS — AURORA PUMP COMPANY

SUBSIDIARY OF THE NEW YORK AIR BRAKE COMPANY
90 Loucks Street, Aurora, Illinois

STOP Slime and Scale in Your Humidifiers



WE'VE a handy little booklet that tells all about good maintenance of air conditioning equipment. In it you will learn how to get rid of lime scale. How to prevent lime scale from forming.

You'll find out how to fight slime. How to prevent it from fouling up spray jets, lines and tanks. Discover easy ways to clean finned coils of air washers; aluminum plates and screens; glass filters. How to descale cold diffusers.

We'll be glad to send you this booklet. It's FREE! Write Oakite Products, Inc., 42 Rector Street, New York 6, N. Y.

SPECIALIZED INDUSTRIAL CLEANING
OAKITE
MATERIALS • METHODS • SERVICE
Technical Service Representatives in Principal Cities of U. S. & Canada

Thread guides with metallized areas by American Lava.

wish to solder the guides in place so as to preclude any possibility of their coming off or of altering their exact position.

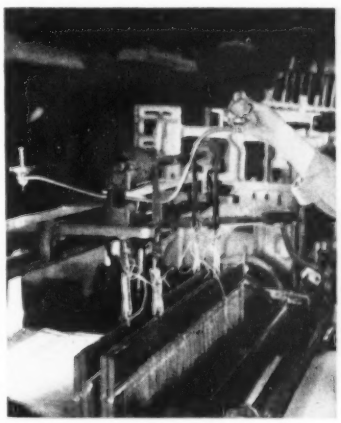
The characteristics of the ceramic are not altered in any way. Selected areas can be metallized and the metal fired into the ceramic to become an integral portion of that section of the ceramic. That metallized area of the ceramic is then built up by the manufacturer to any desired thickness by electro-plating.

Some AlSiMag guides are made of an electrically conductive ceramic to aid in the control of static. Soldering these electrically conductive guides into position on a grounded metal seems to improve their performance in the bleeding off of static electricity.

American Lava Corp., Chattanooga 5, Tenn.

For additional data, request item E-107, using Handy Return Card on page 206.

NEW Equipment AND MATERIALS



Loom equipped with radioactive static eliminator.

Inexpensive Device Prevents Fog-Marking of Woven or Knitted Fabrics

A radioactive static eliminator for the prevention of fog-marking of woven or knitted fabrics of acetate, rayon, nylon, and similar fibers that are good insulators, has been developed by the British Cotton Industry Research Association and is being manufactured by the Record Electrical Co., Ltd.

The apparatus, known as the Shirley RASE unit, is small and inexpensive, simple in design, and has been found to be efficient and safe in practical use.

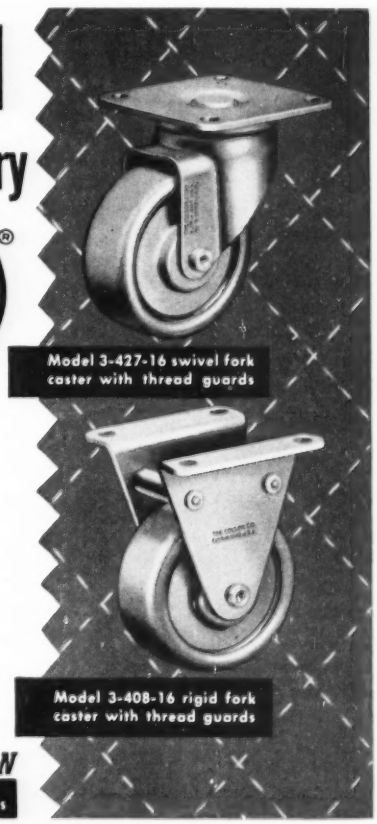
Close-up photo of the Shirley RASE unit for static elimination.

The active element of the unit consists of thallium, specially treated to render it radioactive. When in position, it emits beta rays which ionize the surrounding atmosphere, enabling the static charges to leak away, thus preventing the fog-marking.

The unit containing the radioactive thallium fits into a brass cup to which it is attached by a chain. When in use, the unit is taken from the cup and suspended by the chain above the warp.

Two units are normally required for each loom, one being placed midway between the heddles and the reed, and the other behind the heddles. The units are suspended

Designed by the Textile Industry built by Colson®

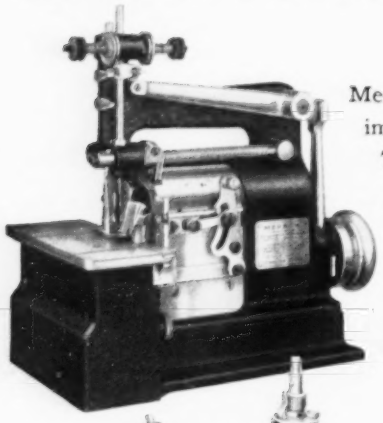


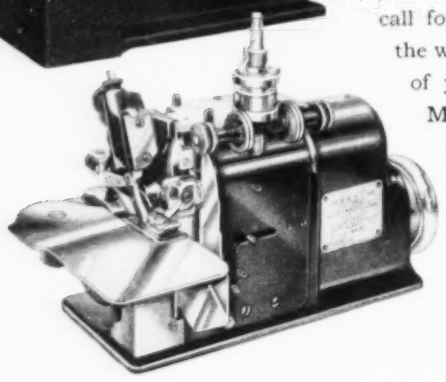
Our friends in the Textile Industry worked with us in developing casters and materials-handling trucks to meet their needs—*exactly*. The result is a line of casters, hand trucks, platform trucks, box trucks, and drum and barrel trucks that can add extra efficiency to any mill operation. COLSON Casters roll easily over all floors, swivel freely, are rust resistant. Many models have thread guards. Write us or consult the yellow pages for the COLSON office near you.

Write for free catalog—
"COLSON Trucks and Casters"

THE COLSON CORPORATION
ELYRIA, OHIO
CASTERS · LIFT-JACK SYSTEMS · INDUSTRIAL TRUCKS

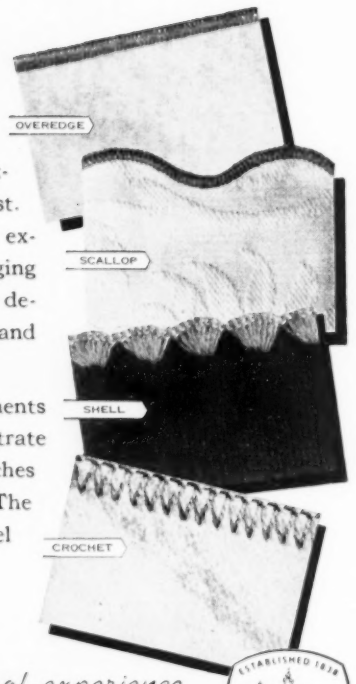
Don't overlook Overedging





Merrow Machines for overedging assure maximum production with low maintenance cost. These machines reflect over 60 years' experience in the manufacture of overedging and overseaming machines. They're designed to produce work with speed and ease of handling.

Don't overlook Merrow if your requirements call for overedging. Let us demonstrate the work of these machines on swatches of your own fabrics. Write to The Merrow Machine Co., 2805 Laurel St., Hartford 6, Conn.



Over a century of experience

MERROW

TRADE MARK REG

What your plant can

accomplish

with Vision Screening

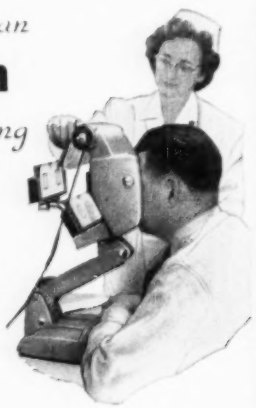
We have just made up a report of savings made by 59 plants:

Big savings in *cost of training new employees* (as high as 75%); reduction in *accidents* and *spoilage;* labor *turnover* reduced 30% or more.

Also increased earnings of employees, less absenteeism, and other gains.

Briefly summarized in a Booklet—which we'll be glad to send to any personnel official on request.

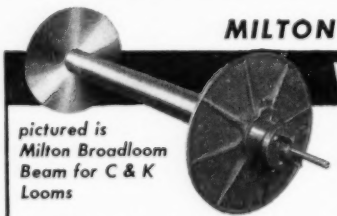
Keystone View Co., Meadville, Penna. Pioneers in Binocular Vision Testing.



KEYSTONE
OCCUPATIONAL
VISUAL SERVICE

MILTON STEEL BARREL

WARP BEAMS



pictured is Milton Broadloom Beam for C & K Looms

for BROAD, NARROW FABRIC, RIBBON, VELVET & CARPET LOOMS

MILTON steel barrel Warp Beams are sturdily constructed with cast iron adjustable or fixed flanges. Ends equipped for all types of let-off.

WRITE FOR FREE BULLETINS

No. 45-B (Steel Beams) No. 49-A (Light Metal Beams)

MILTON MACHINE WORKS, INC.
MILTON • PENNA.

U.S. ACME

MODERN THROWING EQUIPMENT

• CONVENTIONAL • HIGH-SPEED • HEADLESS PACKAGE
• TAPERED PACKAGE

DOUBLE DECK TWISTERS

four types to meet your specific requirement

U.S. TEXTILE MACHINE CO.

700 Gilligan St. — Scranton 8, Pa., U.S.A.

Want More Information on These Items?

Write key number (E-500, etc.) in appropriate space on Handy Return Card on page 206, and drop card in mail.

An all-purpose, portable, **black light inspection unit,** Model B-50-H Mineralight throws a powerful directional beam of long wave ultra-violet up to 30 feet away. Useful for detecting oil leaks in machinery and on fabrics, it operates on 110-volt a-c current.

Ultra-Violet Products, Inc. (E-215).

A **warp size** that can be applied at room temperature to cotton, spun rayon, worsted, and filament viscose yarns is called "Kosize." Eliminates need for heated storage kettles and size boxes.

National Starch Products (E-701).

White non-tarnishing and washable **metallic yarns** are now available, being cut in 1/64, 1/50, and 1/32 inch widths.

The Metlon Corp. (E-217).

The Fischbein **portable bag closing machine** is being used for joining cuts of piece goods in the finishing processes. Operator has only to hold and guide machine. Thumb switch starts and stops device.

Dave Fischbein Co. (E-213).

50% more powerful non-electric, **permanent plate magnets,** Models 1-H and 2-H, for removing tramp iron from material carried in chutes, ducts, or on belts are now available in a complete range of sizes.

Dings Magnetic Separator Co. (E-214).

about 12 to 15 inches above the warp by fitting to the loom a simple bracket to which they are clamped.

On stopping the loom for the night or over the week-end the units are removed from the brass cups and allowed to hang from their suspension chains. They are left in this position while the machine is idle, being returned to the brass cups on restarting. While the units are in the brass cups the operative is effectively screened from the beta rays.

Every precaution has been taken to safe-guard the operative, and with correct handling there is said to be no risk whatever.

The units can also be used to prevent fog-marking on warp knitting machines, warping machines, and lace machines. They have an estimated life of four to six years.

Record Electrical Co., Ltd., Altrincham, Cheshire, England.

For additional data, request item E-105, using Handy Return Card on page 206.

Half-Die Collar Machine for Knitted Garments

Primarily developed to turn and shape woven collars, one-half at a time, the Amco Half-Die Collar machine is now finding wide and successful application in the knitwear field because of the current vogue for knitted sports shirts with precision-formed collars.

Its outstanding features and advantages are: A thermostatic heat control unit calibrated in degrees Fahrenheit for correct pressing of different fabrics plus additional heating elements controlled by a single switch; a pressing surface is provided on each side of the die which is equal to one-half the length of the collar; pressure arms which are adjustable to equalize pressure; a form carriage which may be operated either by foot treadle or hand pusher; and an adjustable carriage on which the die blades are mounted and which permits the blades to be positioned to suit the length of collar points.

Production figures vary according to the type collar and fabric, but the average is about 15 dozen collars per eight-hour day. The machine is also available without turners; this model will produce, on an average, 200 dozen collars per eight-hour day.

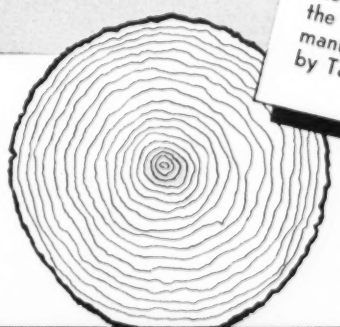
The American Safety Table Co., Inc., Reading, Pa.

For additional data, request item E-118, using Handy Return Card on page 206.

ONCE USED, ALWAYS SPECIFIED!

EVER-DEPENDABLE TATEM SELECTED HICKORY PICKER STICKS

Yes—Tatem picker sticks cost a little more but last much longer. That's because they are made of only finest quality hickory — perfectly cut, seasoned and finished. Low maintenance cost on looms carrying these picker sticks testifies to the knowledge and modern manufacturing skills developed by Tatem over 84 years.

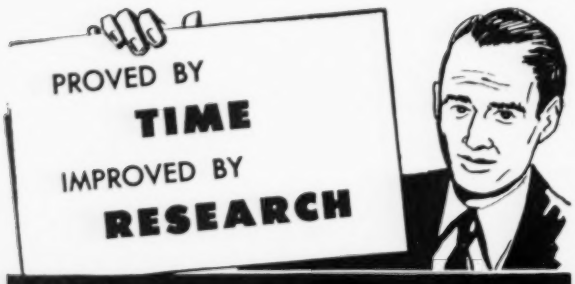


FOR THAT STRONG, SMOOTH STROKE AT THE HEART OF YOUR LOOM YOU'LL STAY SOLD ON TATEM.

PICKER STICKS • PARALLEL PLUGS • SWEEPSTICKS • CONNECTORS and OTHER LOOM PARTS

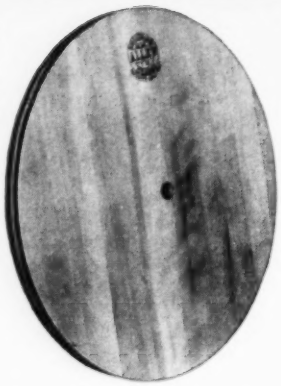
TATEM MANUFACTURING COMPANY
EASTFORD, CONNECTICUT

SOUTHERN REP.— GREENVILLE BELTING CO., GREENVILLE, SOUTH CAROLINA
NORTHERN REP.— TATEM SALES COMPANY, EASTFORD, CONNECTICUT



GENUINE **ALLEN** WARPER BEAMS AND BEAM HEADS

Products of 35 years of Know-how, plus constant research.



Different makes of wooden beams may look pretty much alike, but some serve their purpose better than others. Allen know-how, plus constant research, produces the world's best beams, as attested by overwhelming mill preference.

RESILIENT, UNBREAKABLE HEADS

Allen wooden warper beam heads are superior in use because they will spring without taking a set. Laboratory deflection tests up to 15 tons leave these heads unaffected. We are constantly working to improve our heads. The results do not show to the eye, but they do show up in operation, in longer beam life and yarn protected from damage.

NEW BARRELS FOR SYNTHETIC YARNS

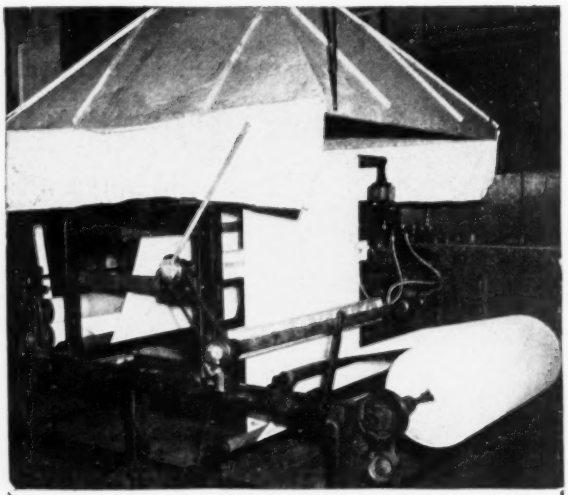
Extensive research has enabled us to develop beam barrels that withstand the pressures of the new synthetic yarns. Warps are built uniformly with no soft cores, and no trapping of yarn at heads.

ALLEN BEAMS Withstand the Ravages of Shipping . . . Protect Yarn, Save Dollars.

ALLEN
BEAM COMPANY
High Speed Warper Beams
Warper Beam Heads
Loom Beams
Adjustable Loom Beam Heads

General Offices — 151 River Road
New Bedford, Mass.
Representatives in all Textile Localities
and all Principal Countries of the World.

"GOOD WARPS ARE MADE ON GOOD BEAMS"



RED RAY BURNERS

For a Better Singe

Red Ray Burners installed on a singeing machine give better and faster singe. Reduce costs.

Write for further information.

Red Ray Manufacturing Co., Inc.
455 W. 45th St. Tel: Plaza 7-5174 New York, N. Y.

Call on us for Quick Service

on:

RING HOLDERS
BOBBIN SHAFT GEARS
BOBBIN GEARS
SPINDLE SHAFT GEARS

Kluttz Machine and Foundry Company
P. O. Box 71, Gastonia, N. C. • Telephone 5-3921

LAZENBY

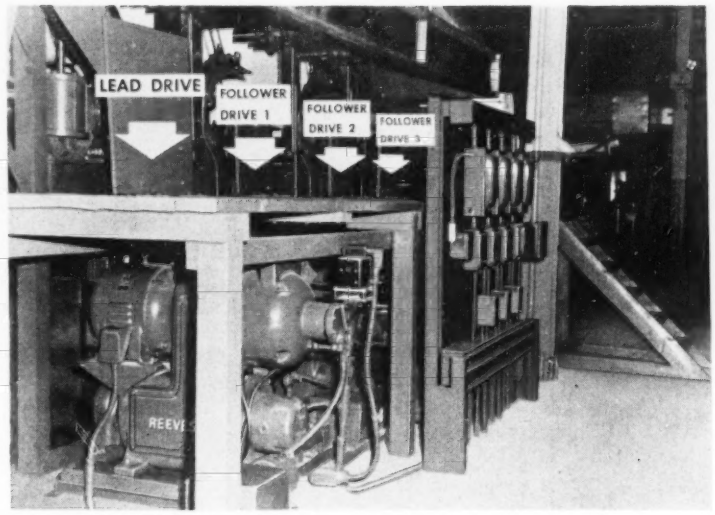
Filling Winders

Since 1902 used by

Mills weaving conveyor belts, cotton duck, tire and other heavy duty fabrics.

For either plain or automatic looms, we have the properly designed machine to meet your needs. Always rely on LAZENBY for COP and BOBBIN WINDERS.

THE F. A. LAZENBY COMPANY
3106 Elm Avenue Baltimore 11, Md.



Reeves range drive eliminates necessity for converting current.

Alternating Current Drive for Finishing Ranges

A new alternating current range drive gives accurate, immediate, infinitely variable speed control plus automatic inner-drive synchronization of all components without the problem of converting current. No generators are utilized in this constant-torque drive which does not need oversize capacity for reduced speeds.

The Reeves Range Drive is a mechanical unit and, consequently, gives two advantages: (1) Any number of follower drive units may be added to the original Reeves installation without adding generators or conversion equipment, and (2) repairs and maintenance are less complicated.

The operating or material speed is set through the lead drive, with the whole system controlled from one control panel. Each follower drive may be adjusted at any time by its own individual manual controls. Once the range is operated, automatic controls take over. As speed variations occur because of stretch, shrink or load changes between units, the drive automatically compensates for the changes and brings all units back into synchronization.

Reeves Pulley Co., Columbus, Ind.

For additional data, request item E-116, using Handy Return Card on page 206.

Device for Tightening Loose Shuttle Tips

A new machine, which is exceptionally simple to use, enables repair of shuttles with loose tips in a matter of minutes without taking them from the weave room.

The machine, designed to be fitted to the wall in the weave room, consists of an adjustable clamp which screws downwards to the undamaged tip of the shuttle. This clamp is an electrode. The lower part of the shuttle and its loose tip are compressed at the base of the machine.

A small pellet of shellac is inserted between the end of the shuttle tip and the shuttle, so that when the shuttle is heated, the shellac melts and fixes the point once again into the shuttle.

When the pellet has been inserted into the shuttle and the tip or point is pressed home within the clamp,

Orr
SLASHER
Cloth
With Special
Chemical Treatment
Something New and Better

● Slasher Cloth is an important maintenance item in a cotton mill. With the introduction of ORR Slasher Cloth with Special Chemical Treatment, many of the problems which have pestered the slasher room foreman have been eliminated.

The slasher room foreman, in order to satisfy the superintendent and the cost department, must have available a Slasher Cloth that:

1. Dresses the yarn properly.
2. Holds its width. No shrinkage.
3. Maintains level production performance.
4. Starts fast — lasts long.

ORR Special Treated Slasher Cloth maintains uniform dressing properties, resists bacteria and steam degradation, maintains dimensional stability. Discuss your Slasher Cloth problem with your ORR representative.

Distributed by

J. S. FALLOW & CO.
279 Union St., New Bedford, Mass.
OLIVER D. LANDIS
718 Queens Rd., Charlotte 7, N. C.
Telephones: 3-0958—3-4557
P. W. COLEMAN
Box 1393, Greenville, S. C.

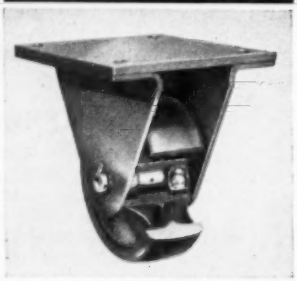
MANUFACTURED BY
THE ORR FELT & BLANKET CO.
PIQUA, OHIO, U. S. A.

Industrial Woolens by Orr
STARTS FAST — LASTS LONGER

. . . Especially Designed by Darnell Engineers for Use on

DOFFING TRUCKS

THE XE-74-WCI



Darnell designed for Doffing Trucks here is a caster that will give years of trouble-free service. . . that stands the abuse peculiar to Doffing Truck operation. Note the extra-heavy rimmed, high crowned Darnelloy wheel, featuring closely fitted string guards which keep caster free-rolling at all times. Extra heavy ball races and cones with solid row of precision balls. Alemite Zerk lubrication. Wheel designed for large grease capacity.

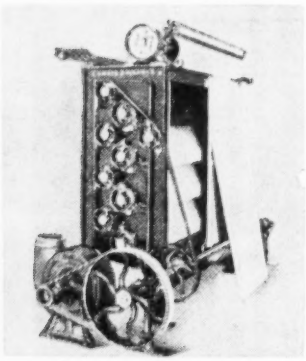
Why Not Ask Your Distributor To Show You This New Caster

DARNELL CORPORATION, LTD.

DOWNEY (LOS ANGELES COUNTY) CALIFORNIA
60 WALKER STREET, NEW YORK 13, NEW YORK
36 NORTH CLINTON STREET, CHICAGO 6, ILLINOIS

EIGHT-ROLL VERTICAL BRUSHER

Showing Exhaust Fan



The illustration above shows a Vertical Brushing Machine with eight cleaning rolls, individual dust chutes, hoppers, and exhaust fan. It can be used to give a considerable increase to the brushing capacity of present equipment, and can be run in connection with a Horizontal Brusher.

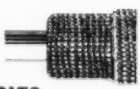
A recent development in our Vertical Brushing Machines is the quick adjustment for the cleaning rolls. This makes it possible to change almost instantly to light from heavy brushing, or vice versa. This can be applied to either our Six-Roll Brushing Machine, or the Eight-Roll. Our Bulletin No. 336, describing this feature, is yours for the asking.

Curtis & Marble
MACHINE COMPANY
WORCESTER, MASSACHUSETTS.

FREE TRIAL

Davis Card Scavenger Roll Covers®

Strip Clean Instantly
Fit Any Sized Roll
Hug "Beat-Up" Rolls Tightly
No Seams—No Frayed Ends
Outlast Paper or Cloth Covers—3 times

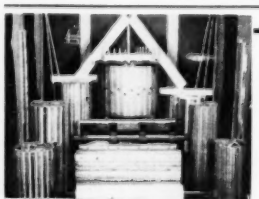


Free Trial: Send us an old scavenger roll to be recovered. We will return it to you prepaid and let you be the judge.

We also make: Knit Dye Tubing; Sheepskin and Cloth Clearers; Star Brand ★ Roller Varnish.

THE TEXTILE LABORATORIES

P. O. Box 1003 Telephone 5-2791 Gastonia, N. C.



PROMPT SERVICE on

- **BEATER LAGS for all makes, fitted to order**
- **COMPLETE BEATERS—Kirschner and Plate**
- **ALL TYPE APRONS, both new and reworked, including fireproof aprons**

TODD-LONG PICKER APRON CO.

Gastonia, N. C. Plant 5-4021 Night 5-5149

a push-button is depressed and a 300-amp, 1-volt current is passed through the shaft of the shuttle, creating a high local heat within a matter of seconds. This melts the shellac and the point becomes firmly fastened within the shuttle again. After it has cooled, the shuttle with its firmly fixed point is once again ready for weaving.

Manfred Erhardt & Co., Augsburg, Leitershofer Strasse 80, Western Germany.

For additional data, request item E-108, using Handy Return Card on page 206.

Weatherproof Car Loading

Among the benefits to be derived by using the Elwing Weather Screen, a protective canopy which attaches quickly to any standard boxcar door and spans the gap between car door and loading platform or warehouse door, are weatherproof product protection, better working conditions, safe trucking operations on dry dockboards, less heat loss in heated buildings, reduction of damage, delays and demurrage. Truck loading models, for attaching to warehouse doors, are also available.

These weather screens are available in three models. Model A is equipped with overhead canopy only, with adjustment for directing water spillage right or left. Model B is equipped with overhead canopy and one side curtain (adjustable 7 or 8 feet high and attachable to either side of overhead canopy). Model C is equipped with overhead canopy and two side curtains. Canopy projections are 38", 50" or 62" depending on span between car and platform or warehouse.

The Elwing Corporation, 915 W. Adams Street, Jacksonville 4, Fla.

For additional data, request item E-703, using Handy Return Card on page 206.

Low-Cost Procedure for Removing Graphite from Nylon Lace

A low-cost procedure for removing graphite from nylon lace utilizes new 100 per cent active "Emkaterge A Powder" and "Emkaterge B."

With these chemicals, a clean tank, hot water, and a mechanical stirrer of simple construction, the mill can prepare its own graphite cleaning solution in less than 30 minutes, with a substantial saving in cost.

Emkay Chemical Co., 319-325 Second St., Elizabeth, N. J.

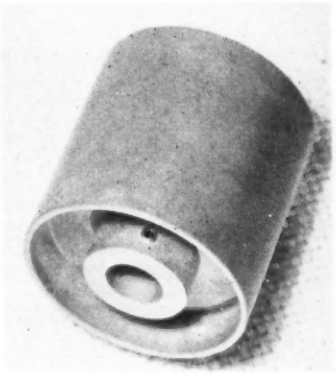
For additional data, request item E-704, using Handy Return Card on page 206.

Laminated Plastic Emulsion Rolls Resist Acidic Size

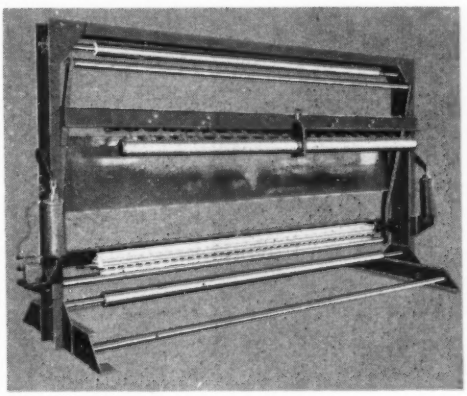
Laminated plastic emulsion rolls 3" long for Universal and Foster type nylon sizing machines are designed to solve the two-fold problem of yarn staining and corrosion resistance.

The outer shell is fabricated from 3-in. OD Grade XX tubing and provides an extremely smooth surface for the yarn to ride over. By resisting the corrosive action of newer and increasingly acidic sizes currently being used, grade XX eliminates the

NEW Equipment AND MATERIALS



Synthane emulsion roll for nylon sizing.

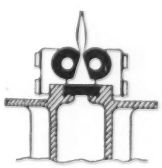


FOR FAST, UNIFORM SINGEING of Rayons, Cottons Rayon-Cotton Blends Rayon-Wool Blends and Worsteds

You'll be yards ahead with the

I.H.E. SINGEING MACHINE

This heavy duty machine singes closely and uniformly on either or both sides of the cloth in a single pass. Operates at speeds from 25 to 300 ypm, depending on type and weight of fabric. Electric and air-powered mechanism cuts off burners and lifts cloth away automatically when cloth speed drops below a predetermined level, or stops. Burns oil or gas. Write for details and specifications today.



Exclusive Burner Design

Patented. High velocity flame retention type burners that singe interstices as well as surface of cloth.

INDUSTRIAL HEAT ENGINEERING COMPANY

121 CLEVELAND ST. GREENVILLE, S. C.

NEW Equipment AND MATERIALS

staining problem caused by progressive corrosion of rolls.

The ¾-in. ID hubs are fabricated from Grade C, a fabric-base material possessing high mechanical strength. Hubs are press fitted and cemented with a non-corrosive adhesive. Stainless steel set screws lock the assembled rolls to the steel shafts.

Synthane Corp., Oaks, Pa.

For additional data, request item E-115, using Handy Return Card on page 206.

Detergent-Softener for Woolen and Worsted Knit Goods

"Monaterge 289" is a very efficient and economical scouring agent for high quality woolen and worsted knit goods. It combines in its action good cleaning with excellent softening characteristics.

The product can be used in cold or hot water, with or without alkalies, such as soda ash or phosphates, with high or low water level in the wash wheel, so that felting and shrinkage of the goods can easily be avoided or controlled.

For a normal wash run with goods of low oil content, use cold or lukewarm water. A load of 125 lb, for instance, in a wash wheel with a high water level of 150 gallons, re-

SAVE UP TO $800 YEARLY with the right SHUTTLE FUR

- FREE BULLETIN SHOWS HOW to SAVE on SHUTTLE FUR
  For the best weaving results—give us a trial on your shuttle fur requirements
- FREE SAMPLES OF SHUTTLE FUR
  In any width or grade. Also whole hides from Australian, Brown and Gray Opossum

WRITE TODAY FOR PRICES AND SAMPLES

MORRIS FUR COMPANY
P.O. BOX 816 • Phone: 6-5934 • BURLINGTON, N.C.

Style 2500

Stahmer Wet Process
WOOD SOLE SHOES
Protects the Feet

Water, chemicals and dyes rot out leather and rubber soles causing injury to workers' feet. The long wearing lightweight maple soles on Stahmer Shoes give protection plus comfort, and prevent slipping. Heavy leather tops are double stitched and riveted. Cut down accidents and expensive layoffs. Buy direct from manufacturer. Price as low as $2.90 a pair. Sizes 5 to 12. Send for Catalog 33.

STAHMER SHOE COMPANY
Davenport, Iowa

Sterling Ring Travelers

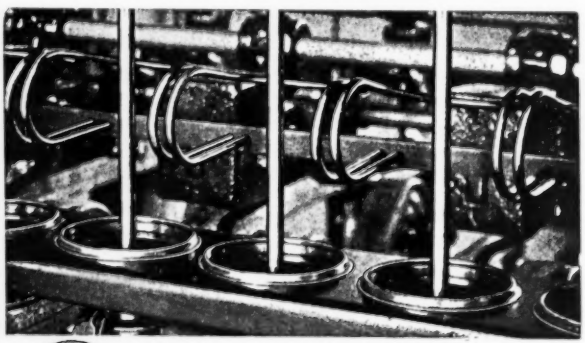
SPEED

Who says whether you can speed up your spinning or twisting and get good results?
THE RING TRAVELER.
It will only stand so much before breaking or burning and flying off.
It would be advisable to compare and check Travelers before trying to increase speeds.

SEE THE STERLING MAN

M. H. CRANFORD, Box 204, Chester, S. C.
D. R. IVESTER, Box 392, Clarkesville, Ga.
J. S. FURTADO, Box 803, Fall River, Mass.

STERLING RING TRAVELER CO.
FALL RIVER, MASS.



G-C TWISTER RING GREASE... 40% Higher Melting Point

Laboratory tests prove G-C Twister Ring grease doesn't melt at temperatures 40% higher than other greases. Regular mill users find it stays in rings up to 40 hours and longer. No throw-offs, no staining, no clogging. Even distribution, complete lubrication. Used for twisting any yarns. SAMPLE GLADLY SENT ON REQUEST

GEORGIA-CAROLINA OIL COMPANY
Quality Lubricants G-C Since 1919
MACON GEORGIA

Non-melting oils for top rolls, comb boxes, looms and motors.
Ben Boy non-melting greases for dry cans, slashers, calenders, dryers.

quires the addition of 1 to 2 lb of Monaterge 289 to the washer and a washing time of only a few minutes to produce clean and soft goods with no noticeable shrinkage.

After the scouring bath has been dropped, the goods do not require any after-rinse and can be transferred immediately to the extractor.

Mona Industries, Inc., 65-75 E. 23rd St., Paterson 4, N. J.

For additional data, request item E-705, using Handy Return Card on page 206.

Want More Information on These Items?

Use Handy Return Card on page 206, giving Key Number (E-500, etc.) which appears after the name of the supplier of the item in which you are interested. Or, if you prefer, write supplier direct.

A cationic dye fixing agent, Hartofix, imparts water resistance to direct dyeings on cotton, rayon, and other cellulosic fibers. May be used alone or in conjunction with copper salts to increase water and wash fastness of wide range of direct dyes.

The Hart Products Corp. (E-201).

Suspended **gas-fired space heaters** suitable for natural, manufactured, mixed, liquid petroleum, sewage or coke-oven gas, are available with input capacities ranging from 85,000 to 215,000 Btu per hour. Bunsen type burner assembly can be removed quickly for easy servicing and cleaning.

Dravo Corp. (E-202).

A **pressure-sensitive paper tape,** "Scotch" brand No. 260, is designed especially for carton sealing applications that must hold under all weather and handling conditions.

Minnesota Mining and Manufacturing Co. (E-203).

A small, **right angle worm drive** for application on textile processing equipment such as looms and knitting machines is designed to fit shafting from 3.8" to one inch in diameter. One turn of universal joint to ten turns of driving shaft.

Durant Manufacturing Co. (E-204).

Much time, effort, and space can be saved when the Alvey **air-operated switch section** is used to dispatch heavy packages to any one of several diverting lines. Push-button controlled unit is available in various sizes and styles to meet requirements of specific jobs.

Alvey Conveyor Manufacturing Co. (E-205).

A shuttleless **narrow fabric loom** weaves fabrics up to 3 in. wide with a lock-stitch edge at speeds up to 2,000 picks per minute.

Disco Industries (E-702).

A non-blocking **vinyl acetate copolymer** for textile finishes, designated Polyco 503, may be diluted with water and stored indefinitely at low concentrations, provided mild agitation is used to redisperse any resin which might settle out. Finishes deposited are usually light-fast and heat resistant; unaffected by mildew, bacteria, or fungi; do not require curing.

American Polymer Corp. (E-218).

A new **line of motors** in ratings from one to 40 hp, in NEMA frames up to 405, can be used in applications involving dyeing, bleaching, finishing, etc. Available in totally enclosed and Underwriters' Approved explosion-proof construction.

Robbins & Myers, Inc. (E-212).

The Thayer Model 200S **Checkweight Scale** automatically indicates weight of filled containers and then separates the off-weight containers from properly filled packages by utilizing a two-way conveyor belt. Independently adjustable tolerance settings establish over-weight and under-weight limits.

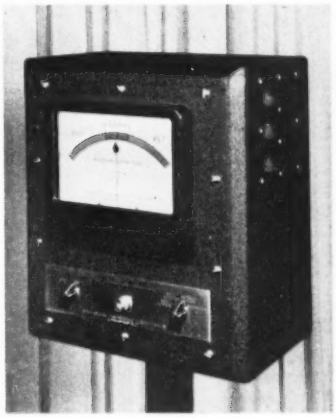
Thayer Scale and Engineering Corp. (E-206).

A heavy-duty, steel-sheathed **immersion heater,** the Clepco-Glorod Series W, for alkaline bath heating is portable. A single unit can serve many tanks. Immersed directly in liquid, it provides heat only where needed.

Cleveland Process Co. (E-207).

LOW COST

MOISTURE MONITOR



- STEPS UP PRODUCTION
- PROTECTS QUALITY

This amazingly simple electronic device accurately measures and indicates moisture content, condition or regain on slashers, tenters, dryers, etc. Easily installed by your own mechanic.

TESTED . . .
16 instruments on 16 slashers in practically continuous operation for 16 months—

PROVED . . .
Perfect service record except for replacement of two tubes during 16-month test period.

ACCEPTED . . .
The Moisture Monitor now in use in many large and small mills.

Your Inquiry Invited!
Prompt Attention.

STRANDBERG
ENGINEERING LABORATORIES
416 W. Market St.
Greensboro, N. C.

X ✓ #11 OK ↙

YOU GET THE BEST MARKS when you use

STAONAL® MARKING and CHECKING CRAYONS

Waterproof, gritless, permanent or semi-permanent as required. Black, white or colors. All laboratory checked for flawless performance.

TEXTILE MILL Chalk Crayon for chlorine or peroxide bleaching processes. All colors.

SPECIAL SILK Marking Crayon No. 295 for silk, rayon, other fabrics. Washes out. 9 colors.

CARPENTERS' CHALK for chalk lines, patterns, etc. Hemispheres in white, red or blue.

SEND FOR FREE illustrated marking crayon price sheet to Dept. TTI

BINNEY & SMITH CO.

41 East 42nd Street, New York 17, N. Y.

Celebrating 50 Years of CRAYOLA® Leadership

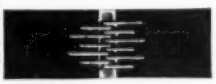
10 TIMES FASTER THAN STITCHING!

SPINDLE TAPE LACING EQUIPMENT

Lace spindle tapes 10 times faster with Clipper No. 25 Spindle Tape Hooks. Tapes can be prepared in advance so frame is shut down only long enough to place new tape on the pulleys and join ends with connecting pin. Tapes run true—last longer—run smoother—require less tension—VIBRATION IS ELIMINATED

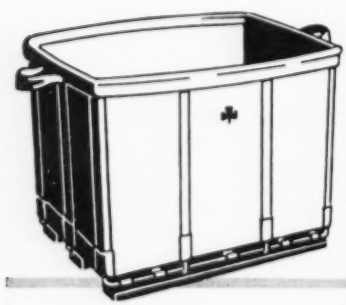
CONDENSER TAPE LACING EQUIPMENT

Lace condenser tapes with Clipper No. 25 Condenser Tape Hooks. Clipper laced tapes, prepared in advance, can be installed in a fraction of the time required for endless tapes. Tape may be purchased in the roll at considerable saving.



CLIPPER BELT LACER COMPANY, GRAND RAPIDS 2, MICHIGAN

Clipper BELT LACING EQUIPMENT — UL



BUILT FOR YEARS OF RUGGED SERVICE

SHAMROCK

CANVAS BASKETS, HAMPERS, TRUCKS

Many styles and sizes. Also special sizes and shapes to meet your need.

SALES OFFICES:
NEW YORK—F. R. Tyrelor, 37 W. 43rd St., MU 2-1437. ATLANTA—W. E. Petway, 4403 Jefferson St., Chamblee, Ga., Phone 7-2430. FORT WORTH—V. M. Hooton, 717 Ayers St., Lockwood 6564. SAN FRANCISCO—c/o Glenn B. White & Assoc. Merch. Mart, HE 1-5204. LOS ANGELES—c/o Glenn B. White & Assoc., 1151 So. Broadway, PR 4169.

MEESE, INC.
Main Office & Plant
MADISON, INDIANA
Phone 261 or 262

FIT BETTER—WEAR LONGER

Precision-Built Kentex Aprons made to any specifications, on short notice. Write for free samples and prices. We are world's largest manufacturers of genuine leather textile aprons.

TEXTILE APRON COMPANY
EAST POINT, GEORGIA

Hugh Williams & Company, Toronto Canada—Canadian Representative

Knitting and Warp Yarns

Cotton
4's to 30's

Viscose Rayon and Blends with Orlon, Vicara and Dynel
18's to 30's, single and ply

COMER-AVONDALE MILLS, INC.

Boston — Chattanooga — Chicago — Charlotte — New York
Philadelphia — Reading

representing

AVONDALE MILLS
Sylacauga, Alabama

COWIKEE MILLS
Eufaula, Alabama

NEW Equipment AND MATERIALS

Dynamic Flyer Balancing Machine

A new machine for the balancing of flyers has been specially designed for use by textile machinery manufacturers and spinning mills with routine flyer maintenance. The machine consists primarily of an electrically driven turntable head on which the flyer to be tested is mounted. A light ray off-balance indicating system gives the direction and degree of unbalance on a calibrated panel. Calibrations for different types of flyers can be supplied.

The method of operation of the machine is extremely simple, requiring no skill. The flyer is first mounted on the head, the motor is started, and the reading on the panel is noted. The flyer is then brought to a standstill by switching off the motor and applying brakes, and the direction of the unbalance is marked on the flyer with the aid of the angular degrees engraved on the head, the whole operation taking approximately 10 seconds.

The flyer is removed and tentatively corrected by bending (a process requiring some experience), after which it is replaced on the head and retested. The operation is then repeated until a perfectly balanced flyer is obtained.

Roman Hofmann, 4 Laburnum Road, Davyhulme, Manchester, England.

For additional data, request item E-706, using Handy Return Card on page 206.

◆◆

An Executive Views the News in Textiles

(Continued from page 97)

cause it gives the average citizen the feeling that his government is ready for any sort of an emergency which might come up, and if Russian bombers should suddenly span Bering Straits somebody in Washington could press a button and—bing!—all suffering consumers everywhere would be protected by rigid price controls.

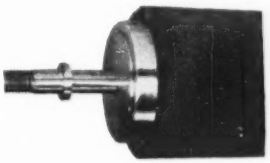
If history has proved nothing else, however, it has shown us that economic controls do not work in America. When you tighten up on one part of the economy the seams burst somewhere else, and before you can stop that leak another seam has broken elsewhere. We have learned that only the law of supply and demand can control prices.

But that argument does not necessarily take care of stand-by controls because there are many people who feel that price controls are necessary in time of war. The real answer to that question is that if price controls are necessary in time of war, then Congress should impose them and we should not have any stand-by program, because stand-by programs always take personnel and money.

What the "Old Guard" in OPS, many of them alumnae of the old OPA, would like to see is some sort of stand-by program which would provide jobs for them during what they hope is a brief interlude between left-wing administrations.

America cannot support that sort of job security. There is no need for a program of stand-by price controls.

We can supply ANY TYPE FURNISHERS you need.



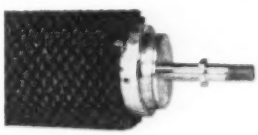
"FINESET"

Note the dense bristle and smooth surface of this typical In-Dus-Co furnisher brush.

This is an extremely light, metal core brush with fine, even bristle, set in water-alkali-and-acid-resisting plastic, with no metal used in binding the bristle onto the metal core.

Many users report that it carries more color and cleans the engraved roll better than do tufted brushes.

TUFTED



With metal core, and metal wound —for those who prefer this construction. Incorporates specific improvements not found in other brushes of this type.

Both types of In-Dus-Co brushes may be dynamically balanced if specified. Bristles are renewable.

Send for the full facts about both these efficient brushes.

INDUSTRIAL BRUSH COMPANY

WOODSIDE AVENUE
LITTLE FALLS, NEW JERSEY

M·B "AMOSKEAG" PNEUMATIC ROLL PICKER

MODEL A-VT-A
20,000 R.P.M.

This is NOT a grinder, but the original pneumatic tool especially designed for the SPECIFIC Purpose of

REMOVING LINT and FLY
from the top rolls and other parts of the drafting elements on

SPINNING FRAMES also ROVING FRAMES

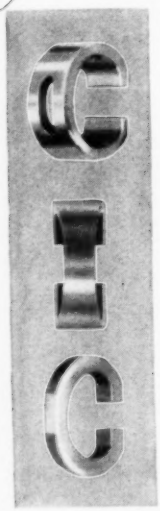
Spindle design permits using PICK (which gathers the fly and lint), 3/16" diameter by 5" long when used on Spinning Frames and 3/16" diameter by 7" long when used on Roving Frames. Exhaust air directed back of roll picker to prevent fly and lint from being blown into yarn when spinning, by air deflectors. Weight only 14 oz. Special grease-sealed bearings. No lubrication required.

WILSON F. HURLEY.....P. O. Box 1443, Greenville, So. Car.
Virginia and South Carolina
J. W. DAVIS.....P. O. Box 745, Columbus, Ga.
Georgia, Alabama, Mississippi, Louisiana
CHARLOTTE SUPPLY CO.....Charlotte 1, No. Car.
North Carolina Representative
GEO. M. HAND, c/o Matthews Equipment Co., 509 No. 25th St., Reading, Pa.
N. Y., Pa., Maryland & New Jersey Rep.
R. D. HUGHES SALES CO.....1812 Main St., Dallas 1, Texas
Texas, Oklahoma and Arkansas
MATTHEWS EQUIPMENT CO., 93A Broadway, Providence 3, R. I.
New England Representatives

M·B PRODUCTS
46 Victor Ave.
Detroit 3, Michigan, U.S.A.

RING TRAVELERS

for every spinning and twisting purpose



UNITED STATES STANDARD
AMERICAN
HICKS
WILSON
•
WENTWORTH
Double Duty Gravity Express
Gravity Bal — Ellipsoid
•
NATIONAL-ETARTNEP FINISH

We regularly make ring travelers in the standard common sizes and also design ring travelers to your individual specifications, to meet special requirements. Make use of our long experience in designing and manufacturing ring travelers . . . the most extensive in the field . . . to improve your spinning. Ask us for recommendations. National Ring Traveler Company, Pawtucket, R. I., and Charlotte, N. C.

Frederic L. Chase, Jr.
President and Treasurer
•
L. Everett Taylor
Southern Manager

NATIONAL RING TRAVELERS
OLDEST AND LARGEST MANUFACTURER OF RING SPINNING AND TWISTING TRAVELERS IN THE UNITED STATES

Laminated
BEAM BARRELS

3 and 4 Grooves
5 and 6 in. Diameters

Representatives:
Coleman Co., Inc.
Greenville, S. C.
•
Roy Schrimshire
P. O. Box 906
Columbus, Ga.
Tel. 3-3916

The laminated construction of Specialty Hardwoods' loom beam barrels assures square shoulders, lasting straightness and years of satisfactory service.

- RESIN BONDED LAMINATED HARDWOOD BARRELS.
- STEEL SHAFTS—PINNED TO BARREL—NEVER WORK LOOSE.
- SHAFTS TURNED TO WITHIN .005" TOLERANCE.

AVAILABLE IN CLEAR OR GRAY LACQUER FINISH.

SPECIALTY HARDWOODS, INC.
P. O. BOX 1351 GREENVILLE, S. C.

Industrial Engineers

SPECIALIZING IN TEXTILES FOR OVER ONE-THIRD OF A CENTURY

PAYROLL CONTROLS COST SYSTEMS
SPECIAL REPORTS WORK LOAD STUDIES
COST REDUCTION REPORTS

Ralph E. Loper Co.
GREENVILLE, S. C. FALL RIVER, MASS.

FRANK G.
NORTH
INCORPORATED
MANUFACTURING CHEMISTS
Atlanta, Ga. • P. O. Box 123, Sta. A • Phone RAymond 2196
Marietta, Ga. • P. O. Box 92 • Phone Marietta 9-4323

The Nation's largest manufacturer of Sizing Compounds, Gums, Waxes and other kindred products for all warp yarns.

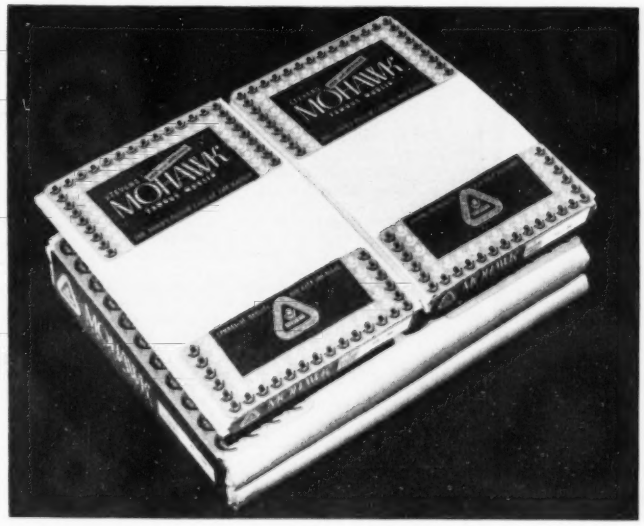
Effective Packaging Pays

(Continued from page 129)

labor.

By refolding all sheets to 9" x 12" and the pillow cases to 6" x 9", the packaging consultants were able to reduce container sizes to one, with variations only in depth; two to six sizes accommodate the various sizes of sheets. Similarly, pillow case containers were reduced to a single size. Stacking is facilitated by the fact that two pillow case packages now take up exactly the same shelf space as one sheet box.

THE REDESIGNED PACKAGE allows the cases to be folded as modular units of the sheets and permits stores to make up combined sets of sheets and cases for customers' needs. One size U-board accommodates all sizes of pillow cases.



Complete Washability for Rayons

Today, we cannot only dye, but chemically finish rayon fabrics to be absolutely and positively shrink resistant. Many laboratory tests, and wear tests too, are now testifying to a shrinkage of less than 2% after as many as 50 repeated launderings. Fabrics treated with either Aquex, "Avcoset" or X-2 are non-chlorine retentive, and any one of these stabilization methods prolongs rather than shortens the life of the cloth.

[For description of the "Avcoset" process developed by American Viscose Corporation, see TEXTILE INDUSTRIES for March, 1953, page 128; Dan River Mills' X-2 process, TI for June, 1952, page 100.]

Aquex is the trade name of Aquex Development & Sales Corp. for new, specially developed resins chemically classified as chelated vinyl co-polymer complexes. The very desirable results obtained by treatment of rayon fabrics with Aquex B.N.W.C. are:

1. Permanent shrinkage control — a residual shrinkage of less than 2%, and so permanent that even after 50 launderings there is no progressive increase in the dimensional change figure.

2. Non-chlorine retention. Aquex finished fabrics have no affinity for chlorine, hence there is no yellowing of white fabrics nor any fabric damage due to ironing.

3. Increased resistance to a-

From paper "The Modification of Cellulose by Chemical Means" by Arthur S. Wachter, manager, converting relations department, American Viscose Corp., presented before American Association of Textile Technologists, Inc., meeting of March 4, 1953.

Best
★ FOR PERFORMANCE
★ FOR LONG LIFE
★ FOR HIGH SPEEDS
★ FOR PRICE
Vermont
SPOOLS AND BOBBINS
SINCE 1906
234 S. CHAMPLAIN ST.
BURLINGTON, VT.

DUNKING STATIONS!
SMOKERS
GOOD HOUSEKEEPING PREVENTS FIRES
PUT 'EM HERE
During the past 7 years, hundreds of plants have discovered that SIPCO "Dunking Stations" are the "all time" solution to their plant smoking problem.
Built for hard industrial use—and abuse! Cigarets, cigars, matches extinguished immediately—no smoldering—no fire hazard.
Unit No. 1—Heavy cast aluminum canister, attractive metal sign, upright and heavy weighted base for use on floors, aisles, etc.
Unit No. 2 (Illustrated)—Same as Unit No. 1, except without upright and base. Easily mounted on walls, columns and posts.
Unit No. 3—Canister alone, with mounting bracket.
Send TODAY for new illustrated folder which gives complete details.
STANDARD INDUSTRIAL PRODUCTS CO.
DEPT. E
116 So. Garfield Ave. Peoria, Illinois

Over a period of many months, numbers of Mill Superintendents, Overseers and Master Mechanics have concluded that the complete answer to all their cleaning problems is

MOMAR

M-4

MAGIC CLEANSER

* * * *

ELIMINATES USING MINERAL SPIRITS

A FREE DEMONSTRATION OR SAMPLE IS YOURS FOR ASKING

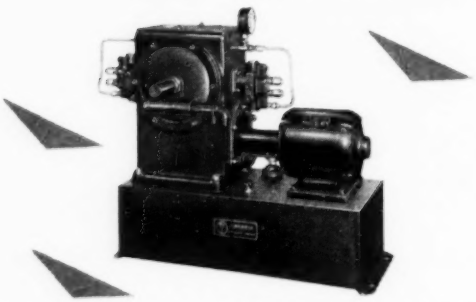
WRITE NOW

MOMAR INCORPORATED

MANUFACTURING CHEMISTS

451 WHITEHALL ST. ATLANTA, GA.

For Guiding Cloth into Tenter Frames



the ASKANIA FOLLOW-UP CONTROL

Here's a simple, dependable, automatic control for guiding cloth into tenter frames. It handles any type of cloth . . . from coarse scrims to heavy woolens. Check these advantages:

- **METAL PARTS DO NOT TOUCH CLOTH.** A breath of air constantly "observes" selvage position.
- **CONSTANT ACCURACY.** The slightest deviation in position of selvage is quickly corrected.
- **EASY TO INSTALL.** Fits existing tenter frames without modification.
- **EASY TO MAINTAIN.** No electronics, no reversing motors . . just simple air and oil lines.

For additional details, request bulletin 260.

ASKANIA REGULATOR COMPANY

242 E. Ontario Street Chicago 10, Illinois

Subsidiary of General Precision Equipment Corp.

BARNES SERVICE *Consulting Engineers*

TO THE TEXTILE INDUSTRY FOR OVER ½ CENTURY

Surveys–Reorganizations–New Plant Developments for Cotton, Wool, and Synthetic Yarn and Cloth Processing, Bleaching, Dyeing, Printing and Finishing.

★ Plant Appraisals ★ Mechanical and Operating Surveys — New Methods ★ Scheduling and Planning ★ Work Load Studies, Job Analysis and Evaluation, with Incentive Plans ★ Standard Cost Installations ★ Cost Control Methods.

Labormeter Burden-meter Waste-meter

Member: Association of Consulting Management Engineers, Inc.

BARNES TEXTILE ASSOCIATES, Inc.

10 HIGH STREET, BOSTON 10, MASS.
522 FIFTH AVE., NEW YORK 18, N. Y.
920-923 MONTGOMERY BLDG., SPARTANBURG, S. C.
European Agent, Ralph L. Hodara, 101 Réaumur, Paris 2

For Nearly Half A Century

• • • • we have been printing Textile Industries and other W. R. C. Smith Publications in our growing plant which is today one of the South's largest, leading and most progressive printing organizations.

L. A. LEE Company, Inc.

DALTON, GEORGIA

Printers and Publishers

PEGGED *and* GLUED! BRISTLES *Stay Put*

LONGER LIFE—Spiral card brushes, refilled the Gastonia way, last from 10 to 15 years, compared with 2 or 3 years when staples are used—for STAPLES WILL NOT STAY PUT IN SOFT WOOD. Gastonia first dips the bristles and fiber in glue, then they are permanently pegged in.

BETTER FINISH—To prevent lint from collecting on rolls, Gastonia paints them with high-grade bobbin enamel, which dries to a hard, glossy finish.

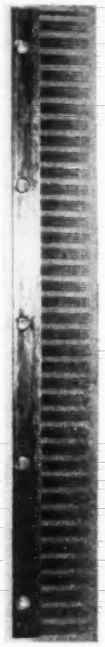
Brushes can be refilled and returned in two days. Freight is paid one way.

JOHN T. HARRELL, MGR. PHONE 5-2422

GASTONIA BRUSH Co.

GASTONIA, N. C.

CONTINUOUS STRIPPER NEEDLE BARS COSTING YOU TOO MUCH?



You don't *have* to buy new continuous stripper needle bars every time a set wears out.

We can rebuild your bars for considerably less than the cost of new ones, and you'll have a tough time telling them apart.

We've rebuilt more than 5000 sets and haven't had a complaint yet . . .

Let us help you cut *your* maintenance costs! Write for prices and details today.

TEXTILE MILL SUPPLIERS

P. O. BOX 906 COLUMBUS, GA.

Permalube
SADDLES and NEBS
Wear Longer • Perform Better and Cost Less!

NO OILING IN THIS MILL

One 600,000-spindle mill has been using Whitehead Permalube Saddles and Nebs for two years on *hardened-steel* rolls. Ends down have been reduced from 30 to 15. Frames are cleaned only once in several weeks, instead of twice daily. And oiling costs have been completely eliminated. Whitehead Permalube Saddles and Nebs can do the same for you. Write for complete information.

Coleman Co., Box 3597, Greenville, S. C.
Roy Schrimshire, Box 906, Columbus, Ga.
Matthews Equip. Co., 93A Brdwy., Prov., R. I.
Doe O'Hair, Box 8254, Charlotte 8, N. C.

WHITEHEAD ENGINEERING CO.
522 WEST PEACHTREE STREET, N.W.
ATLANTA 3, GEORGIA

brasive wear.

If a fabric is dyed with standard fast dyes and Aquex finished, it may be labeled "Wash any way you like."

Application of Aquex, according to the manufacturer's instructions, requires no equipment other than that now in use in finishing plants doing urea or melamine resin applications. Chemical preparation as well as its application is very simple and requires no special, high-priced talent. It is, however, a precise operation and therefore it does require an exact accuracy in handling.

Chemical costs are low. Here is a typical formula: 10% to 15% Aquex B. N.W.C.; 10% of (37%) formaldehyde; ¼% Permasof F; 2¼% sodium sulphate; 2¼% sodium acid sulphate; .1% Sequestrene. Aquex is diluted with an equal volume of water and heated to boil. This mixture is further dissolved with water after which the formaldehyde, Sequestrene, sodium sulphate, and sodium acid sulphate are added. Softener is added last and then the entire mix is strained into pad box.

Finishing plant routing is same as for conventional resin application. Fabrics are padded through Aquex liquor and frame dried. Frame should be set about one inch wider than the required fabric's finished width. After frame drying, a curing of about five minutes at 310 F is required. If finishing equipment can deliver a somewhat higher temperature, a correspondingly shorter curing time is necessary.

Fabric must be washed and neutralized after curing, either in open width or rope form, in a liquor containing a detergent and soda ash at a temperature of 160 F, then rinsed and dried in a relaxed state, preferably in a festoon type dryer.

After drying, fabric is framed to its desired finished width. Last framing requires gentle handling, using no more tension than is necessary to accomplish a smooth finished fabric appearance. The Aquex process is applicable to all types of rayon fabrics where complete and permanent washability is desired. It fits especially well into the shirting, short, and pajama field.

EDWARD H. BEST & CO.
Est. 1888 Inc. 1901

KNOXALL
ROLLER CLOTH
CLEARER CLOTH
ENDLESS CLEARERS
PLUSH

MASS., Boston — Office
222 Purchase St. HUbbard 2-4450

NEW YORK
H. W. CURTIS 735 W. Crescent Ave.
Allendale, New Jersey 1-3521

GEORGIA
W. C. HAMES 185 Pinecrest Ave.
Decatur, Ga. Dearborn 5974

SOUTH CAROLINA, Greenville
WILLIAM J. MOORE
P. O. Box 1970 Tel. 5-4820

Serving the Textile Industry for 28 Years

Supplying, repairing and servicing all types of electrical apparatus.

Locating hard-to-get electrical apparatus is our specialty.

Cleveland Electric Co.

557 Marietta Street, N.W.
ATLANTA, GA.
A friend to Industry since 1925

CLASSIFIED ADS

BUSINESS—EMPLOYMENT—EQUIPMENT—PROFESSIONAL CARDS—OPPORTUNITIES

CLASSIFIED RATES

Rates are net, payable in advance each month. Page is 3 columns, 10 inches deep—30 inches to page. Space measured by even inch vertically by 1, 2 or 3 columns in width. Column width 2¼ inches.

Transient rate for display classified, $8.00 per inch.

Contract rate for space within 12 months period as follows:

	Per Inch		Per Inch
12 inches	$7.50	48 inches	$6.75
24 inches	7.25	96 inches	6.50
36 inches	7.00	180 inches	6.00

POSITION WANTED: 10c per word per insertion; minimum charge $2.00. Cash with order. Box Number address care of TEXTILE INDUSTRIES, 806 Peachtree St., N.E., Atlanta 5, Ga., count as eight words. Advertisements for help wanted, equipment for sale, for rent or wanted, and professional cards are accepted at display rates only.

POSITIONS OPEN—MEN WANTED: Tricot mill managers, supts., overseers and fixers; supts., overseers and fixers for underwear and sweater mills; supt. weaving also designer for pile fabrics; underwear supts; rayon weav. plant asst. supt.; personnel director; asst. supt. jacq. fab. mill; overseers and second hands finishing corduroy and cot. piece goods; overseers cot. bleaching; chemists, chem. engineers and laboratory men; master mechanics and plant engineers; overseers and second hands cotton-rayon piece goods dyeing; overseers cot. weav., cot. card, and cot. spin. for denim mills in South; time study engineers; salesmen and demonstrators; cotton card grinder; sew. mach. fixers.

CHARLES P. RAYMOND SERVICE, INC.

294 Washington St. BOSTON 8, MASS. Telephone LI 2-6547

SPECIALISTS IN PLACING AND IN SUPPLYING TEXTILE MILL EXECUTIVES

WE BUY AND SELL

TEXTILE MACHINERY

THROUGHOUT THE WORLD!

GEORGE W. EGAN

"The Machinery Man Known Everywhere"

WOONSOCKET, R. I. — Phone Woon 3258

YOU CAN COUNT ON WAK COUNTERS

Single - Double - Triple

Rotary Counters • Slasher Counters • Hank Clocks

Pick Counters • Picker Counters • Yardage Counters

W A K INDUSTRIES Charlotte, N. C.

DYESTUFFS

Will buy your surplus and obsolete dyes and chemicals for cash.

NEW ENGLAND PRODUCTS CO.

91 Oliver St. Boston, Mass.

Established 1919

WANTED SUPERINTENDENT FOR THROWING PLANT

Must be fully experienced with thorough knowledge of latest throwing developments and be technically familiar with all operations in processing Nylon, Rayon and Silk for the Hosiery, Knitting and Weaving Trades. Will have complete authority and responsibility for quality and production of approx. 100 employees, with plans for expansion.

Good opportunity with reliable company. For interview state experience, age, salary and when available, which will be treated with strict confidence. Reply to Box No. 578, TEXTILE INDUSTRIES, 806 Peachtree Street, N.E., Atlanta 5, Georgia.

BRASS PIN-PLATES All Sizes

PUT YOUR PIN TENTERS IN TIP-TOP CONDITION
● Pins in Stainless, Monel, Plain Steel
SEND US OLD PLATE FOR QUOTATION
All Diameters Any Length

SOUTHERN TEXTILE WORKS

P. O. BOX 406 ANDERSON, S. C.

EATON & BELL

Patent Attorneys

904 Johnston Bldg.
Charlotte, N. C.
1149 Munsey Bldg.
Washington, D. C.

CONSULTANT

With Technical and practical Textile experience has available time for new assignments specializing in production, quality control costs, incentive systems. Survey of plants and equipment. Plant relocation. Strictly confidential service. Reply to Box No. 579, TEXTILE INDUSTRIES, 806 Peachtree Street, N.E., Atlanta 5, Georgia.

GENERAL SUPERINTENDENT WANTED

Mill in Georgia desires a good general superintendent. Must have experience in weaving and finishing. A fine opportunity for the right man. Write, giving full particulars. Reply to Box No. 581, TEXTILE INDUSTRIES, 806 Peachtree Street, N.E., Atlanta 5, Georgia.

ARE YOU A YOUNG ASST. SUPERINTENDENT WHO WANTS "OPPORTUNITY"?

Position available in large American textile company in one of their Latin American mills, for a man with approximately following qualifications:

A. Textile School or College Graduate.

B. 10 years practical experience in an efficient American **filament rayon weaving plant.**

C. Has come up through the ranks and now is Asst. Superintendent (or Superintendent) but is not satisfied—not getting ahead fast enough.

D. 35 years of age or younger.

E. Realizes the opportunities that exist for greater earnings, less income taxes and quicker advancement in the foreign field and who wants to go abroad.

F. Can be single or married but if married his wife must be able to adjust to foreign surroundings.

If you've got these qualifications—a good starting salary, a wonderful opportunity and a permanent job (with liberal pension benefits) is available.

Write giving full descriptions and photograph of yourself. Strictest confidence assured. Reply to Box No. 580, TEXTILE INDUSTRIES, 806 Peachtree Street, N.E., Atlanta 5, Georgia.

DETROIT MANUFACTURER'S AGENT - DESIRES TO REPRESENT SYNTHETIC FABRIC MILL CAPABLE OF VOLUME UPHOLSTERING PRODUCTION FOR AUTOMOTIVE INDUSTRY. HAVE VALUABLE CONTACTS ESTABLISHED OVER 15 YEARS SELLING WOOLEN AUTOMOTIVE UPHOLSTERING. REPLY TO BOX No. 577, TEXTILE INDUSTRIES, 806 Peachtree Street, N.E., Atlanta 5, Georgia.

Position Wanted

Seeking a position in tricot plant. Thirteen years experience. Familiar with all tricot knitting and warping machines. Present position superintendent. Seeking change. Prefer South. Reply to Box No. 570, TEXTILE INDUSTRIES, 806 Peachtree Street, N.E., Atlanta 5, Georgia.

Renew Your Subscription to

TEXTILE INDUSTRIES

12,724 Requests for Advertisers' Literature

Textilemen are showing a tremendous interest in new products and methods. This is a healthy sign for the future of the industry.

A total of 12,724 requests for material offered by advertisers in TEXTILE INDUSTRIES' "Helpful Booklets" section were received during the past year. Obviously mill men are vitally concerned with improving their production procedures.

And this terrific response is evidence that when textilemen want fresh ideas and new material, they look to T. I. for that information.

Are you taking full advantage of the material listed under "Helpful Booklets"? All the booklets are free, and in this very issue you will probably find something that interests you. . .

Because TEXTILE INDUSTRIES is *the* production and management magazine of the industry!

TEXTILE INDUSTRIES

806 Peachtree St., N.E.
Atlanta 5, Ga.

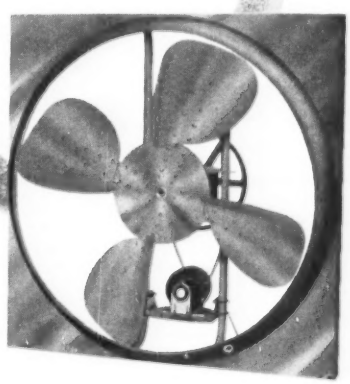
AT LAST!

A MAINTENANCE-FREE INDUSTRIAL FAN FOR TEXTILE MILLS

Murray's new DeLUXE line of industrial fans presents an entirely new concept in textile mill ventilation efficiency. The new Murray DeLUXE models—and *only* Murray's DeLUXE line, of the entire ventilating fan field—offer:

- *Permanently sealed, lifetime-lubricated ball bearings in* both *fan and motor—which* never require lubrication or maintenance. *Install 'em and forget 'em.*
- *Full 10-year guarantee—except for belt and motor which carry standard manufacturer's guarantee.*

NOTE: No industrial ventilating problem is too large, too small, or too impossible for Murray's industrial engineering department. Send us your problems.



INDUSTRIAL FANS FOR TEXTILE MILL VENTILATION

Murray Company of Texas, Inc.

H. C. BIGLIN COMPANY, INC. • 177 HARRIS ST., ATLANTA, GA.

ADVERTISER'S INDEX

A

Abbott Machine Co. ..... *
Advertising Council, Inc. ..... *
Air-Perme-Ator Mfg. Co. ..... *
Aldrich Machine Works 102
Allen Beam Co. 222
Allen Son's Co., Wm. ..... *
Allen Warper Company 216
Allis Company, Louis ..... *
Allis-Chalmers Mfg. Co. 17, 18, 19, 20
Althouse Chemical Co. ..... *
Alvey Conveyor Mfg. Co. ..... *
Amalgamated Chemical Corp. ..... *
American Air Filter Co. ..... *
American Aniline Products, Inc. 187
American Associated Consultants, Inc. .. 213
American Cyanamid Co.,
Textile Resins Div. ..... *
American & Efird Mills, Inc. 202
American Lava Corp. 79
American Moistening Co. 7
American Monorail Co., Inc. 144
American Paper Tube Co. 90
American Pulley Co 45
American Steel & Wire Co. ..... *
American Viscose Corp. 61
Amplex Mfg. Co. ..... *
Anheuser-Busch, Inc. 22
Arkansas Company, Inc. 63
Armstrong Cork Co. 24, 25
Arnold, Hoffman & Co., Inc. ..... *
Ashworth Bros., Inc. ..... *
Askania Regulator Co. 232
Atkinson Haserick & Co. ..... *
Atlanta Belting Co. ..... *
Atlanta Paper Co. 5
Atlantic Steel Co. ..... *
Aurora Pump Co. 218

B

Bachmann Uxbridge Worsted Corp. ..... *
Bahnson Co. ..... *
Barber-Colman (Textile Div.) 154
Barnes Textile Associates, Inc. 232
Best & Co., Edward H. 233
Bijur Lubricating Co. 189
Binney & Smith, Inc. 228
Birch Brothers, Inc. ..... *
Bond Co., Charles 214
Borne, Scrymser Co. ..... *
Brinton Co., H. ..... *
Brush Electronics Corp. 100
Bryant Electric Company ..... *
Buffalo Forge Co. ..... *
Buffalo Pumps, Inc. 50
Butterworth & Sons, Inc., H. W. 87

C

Calco Chemical Division 37
Carborundum Co. 209
Carrier Corporation ..... *
Carter, Inc., A. B. 218
Celanese Corp. of America &
Subsidiary Cos. 48, 49
Ciba Co., Inc. ..... *
Clark Equipment Co. (Industrial
Truck Division) 191
Classified Ads 234
Clayton Co., J. M. ..... *
Cleveland Crane & Engineering Co. ..... *
Cleveland Elec. Co. 233
Clinton Foods Inc. 208
Clipper Belt Lacer Co. 228
Cocker Mach. & Fdry. Co. 158
Cole Co., R. D. 198
Cole Engineering Corporation ..... *
Coleman Company, Inc. ..... *
Colson Corporation 219
Columbia-Geneva Steel ..... *
Comer-Avondale Mills, Inc. 228
Commercial Factors Corp. ... Second Cover
Continental-Diamond Fibre Co. 16
Corn Products Sales Co. ..... *
Crabb & Co., Wm. ..... *
Crane Co. ..... *
Crompton & Knowles Loom Works 11
Crompton-Richmond Factoring Division .. 190
Crossett Chemical Co. ..... *
Curlator Corp. (Textile Div.) 23
Curtis & Marble Machine Co. 224
Cutler-Hammer, Inc. ..... *

D

Darnell Corp., Ltd. 224
Dary Ring Traveler Co. 212
Davis & Furber Machine Co. ..... *
Dayton Rubber Mfg. Co. 8, 9
Dexter Chemical Corp. 81
Dixie Leather Corp. 67
Dodge Mfg. Corp. ..... *
Dommerich & Co., L. F. 84
Dow Corning Corp. 41
Draper Corporation 1
Dronsfield Bros. Ltd. 216
Du Pont de Nemours & Co., Inc., E. I.
(Dyestuff Div.) ..... *
Du Pont de Nemours & Co., Inc., E. I.
(Electrochemicals Dept.) 29
Du Pont de Nemours & Co., Inc., E. I.
(Finishes Div.) ..... *
Du Pont de Nemours & Co., Inc., E. I.
(Plastics Division) ..... *
Du Pont de Nemours & Co., Inc., E. I.
(Textile Fibers) 66

E

Economy Baler Co. ..... *
Emery Industries, Inc. ..... *
Engineered Plastics, Inc. ..... *
Eriez Mfg. Co. ..... *

F

Fafnir Bearing Co. 65
Ferguson Gear Co. 214
Fidelity Machine Co. 197
Fielden Instrument Division 36
Finnell Systems, Inc. ..... *
Fletcher Works ..... *
Foster Machine Co. 164
Foxboro Company 156
Franklin Process Co. ..... *

G

Gaston County Dyeing Machine Co. .. *
Gastonia Brush Co. 232
Gastonia Roller, Flyer & Spindle Co. .. *
Gastonia Textile Sheet Metal Works .... *
Gates Rubber Co. ..... *
Gaylord Container Corp. 98
General Dyestuff Corp. 169
General Dyestuff Corp. (Antara Div.) .. 13
General Electric Co. 42, 43
General Radio Co. ..... *
Georgia-Carolina Oil Company 226
Gifford-Wood Co. 86
Glasco Equipment Corp. 193
Graton & Knight Co. 67
Grinnell Company, Inc. ..... *
Gulf Oil Corp. 59

H

Hart Products Corp. 182
Haskell-Dawes Machine Co. ..... *
Hayes Industries, Inc. ..... *
Hayssen Mfg. Company ..... *
Herr Mfg. Company 31
Holt Hardwood Co. ..... *
Holyoke Machine Co. ..... *
Houghton & Co., Inc., E. F. 69
Howard Bros. Mfg. Co. 92
Hubinger Co. 52
Huffman-Wolfe Co. 204
Hunt Loom & Machine Works, Inc. ... *
Hunter Machine Co., James 46, 47
Hyatt Bearings Division ..... *
Hyster Company ..... *

I

Ideal Industries, Inc. 40
Ideal Mach. Shops ..... *
Industrial Brush Company 229
Industrial Heat Engineering Co. 225
International Salt Co., Inc. ..... *

J

Jacobs Northern Div., E. H. 96
Jenkins Metal Shops, Inc. ..... *
Jenkins-Sons, Inc., M. W. 10
Johnson Bronze Co ..... *
Johnson Corp. 57
Johnson Machine Works, Chas. B. 198

K

Kali Mfg. Co. 202
Keever Starch Co. 170
Keystone View Co. 220
Kidde Mfg. Company ..... *
Kidde & Co., Inc., Walter 56
Klattz Machine & Fdry Co. 222

ADVERTISER'S INDEX

L

Lane & Bros. Inc., W. T. ..... *
Laurel Soap Mfg. Co. ..... *
Lawlor Co., S. C. ..... *
Lazenby & Co., F. A. 222
Lee Co., L. A. 232
Lestershire Spool & Mfg. Co. ..... *
Link Engineering Co. ..... *
Livermore Corp., H. F. 55
Lockwood Greene Engineers ..... *
Logan Co. 195
Logemann Brothers Co. ..... *
Loper Co., Ralph E. 230

M

M-B Products 230
Manton-Gaulin Mfg. Co., Inc. ..... *
Maple Flooring Mfrs. Assn. ..... *
Marquette Metal Products Co. 88
Marshall & Williams Corp. 183
Meadows Mfg. Co. ..... *
Meese, Inc. 228
Merrow Machine Co. 220
Miller Motor Co. ..... *
Milton Machine Works 220
Minneapolis-Honeywell Regulator Co. .. *
Momar, Inc. 232
Monsanto Chemical Co. 54
Monticello Bobbin Co. ..... *
Morris Fur Co. 226
Mt. Hope Machinery Co. 204
Murray Co. of Texas, The 235

N

Nash Company, J. M. ..... *
National Drying Mchy. Co., Inc. ..... *
National Research Bureau, Inc. ..... *
National Ring Traveler Co. 230
National Starch Products, Inc. 184
National Tube Co. ..... *
New Departure Div. 146
New England Bobbin & Shuttle Co. .... *
New York & New Jersey Lubricant Co. .. 6
North, Inc., Frank G. 230

O

Oakite Products, Inc. 218
Onyx Oil & Chemical Co. ..... *
Orr Felt & Blanket Co., The 223

P

Parks-Cramer Co. 152
Penick & Ford, Ltd., Inc. ..... *
Perfecting Service Company 28
Perkins & Sons, Inc. B. F. 68
Permutit Co. 212
Pfister Chemical Works ..... *
Pick Mfg. Co. ..... *
Platt Freres, J. W. & H. 26
Pneumafil Corporation 38
Powell Co., Wm. ..... *
Precision Gear & Mach. Co. 200
Presser & Co., E. J. ..... *
Proctor & Gamble Distributing Co. .... *
Proctor & Schwartz, Inc. 186
Product Sales, Inc. 75

R

Ragan Ring Co. 185
Red-Ray Mfg. Co. 222
Refined Products Corp. 2
Reiner, Inc., Robert ..... *
Reliance Electric & Engr. Co. ..... *
Rice Dobby Chain Co. 203
Richards-Wilcox Mfg. Co. 35
Ridge Tool Co. 12
Riggs & Lombard, Inc. ..... *
Robbins & Myers, Inc. 194
Robert & Co., Associates, Inc. ..Front Cover
Rohm & Haas Co. 73
Ross Engr. Corp., J. O. ..... *
Roy & Son Co., B. S. ..... *
Royce Chemical Co. .....Fourth Cover

S

Saco-Lowell Shops 150
Sandoz Chemical Works ..... *
Sant 'Andrea ..... *
Sarco Company, Inc. 196
Sargents Sons Corp., C. G. ..... *
Saurer, S. A. Adolph 21
Scherr Co., Inc., Geo. ..... *
Scholler Bros., Inc. 58
Scott Testers, Inc. ..... *
Seydel-Woolley & Co. 176
Shafer Bearing Corp. ..... *
Shepard Niles Crane & Hoist Corp. 207
Simco Company ..... *
Sims Sheet Metal Works 214
Sinclair Refining Co., Inc. ..... *
Singleton & Sons, Russell A. 208
Sipp-Eastwood Corp. ..... *
Sirrine & Co., J. E. ..... *
Smith, Drum & Company ..... *
Solvay Process Division, The Allied
Chemical & Dye Corp. 27
Sonoco Products Co. 94
Southeastern Engineering Co. ..... *
Southern Shuttles Div. 14, 15
Southern Sizing Co. ..... *
Southern States Equip. Corp. 78
Specialty Hardwood Co. 230
Stahmer Shoe Co. 226
Staley Mfg. Co., A. E. 180
Standard Card Clothing Co. ..... *
Standard Fabricators, Inc. ..... *
Standard Industrial Prod. Co. 231
Standard Oil Company, Inc. 72
Standard Pressed Steel Co. 70
Star Woolen Company ..... *
Steel Heddle Mfg. Co. 14, 15
Stephens Adamson Mfg. Co. 51
Sterling Ring Traveler Co., Inc. 226
Strandberg Engineering Laboratories ... 227
Sun Oil Co. ..... *
Superior Tube Co. ..... *
Supreme Knitting Machine Co. 74
Swift & Co. 82
Synthane Corp. 71

T

Talcott, Inc., James 210
Tatem Mfg. Co. 221
Taylor-Stiles & Co. ..... *
Tennant Co., G. H. 30
Tennessee Coal, Iron and Railroad Co. .. *
Tennessee Corp. ..... *
Terrell Co. 44
Texas Co. ..... *
Textile Apron Co. 228
Textile Banking Co., Inc. 62
Textile Industries 64, 235
Textile Laboratories 224
Textile Machine Works 76, 77, 104
Textile Mill Suppliers 233
Textile Recorder Exhibitions 80
Textile Shield Co., Inc. 217
Textile Shops ..... *
Theiler Corp., H. J. ..... *
Thomaston Mills ..... *
Tidewater Associated Oil Co. 178
Todd-Long Picker Apron Co. 224
Toledo Scale Co. 32
Torrington Co.
(Latch & Spring Beard Needles) 85
(Needle Bearings) 148
Tower Iron Works ..... *
Treasury Department ..... *
Trico Fuse Mfg. Co. ..... *
Trust Company of Georgia 201
Turbo Machine Co. ..... *
Turner & Hawes Engineering Co., Inc... 4

U

U. S. Bobbin & Shuttle Co. 192
U. S. Ring Traveler Co. ..... *
U. S. Steel Corp. ..... *
U. S. Textile Mach. Co. 220
United States Rubber Co. 60
United States Rubber Co.
(Naugatuck Chemicals Div.) 83
Universal Winding Co. 53, 166
Uster Corporation ..... *

V

Van Vlaanderen Co. ..... *
Veeder Root, Inc. .....Third Cover
Vermont Spool & Bobbin Co 231
Victor Ring Traveler Co. 162

W

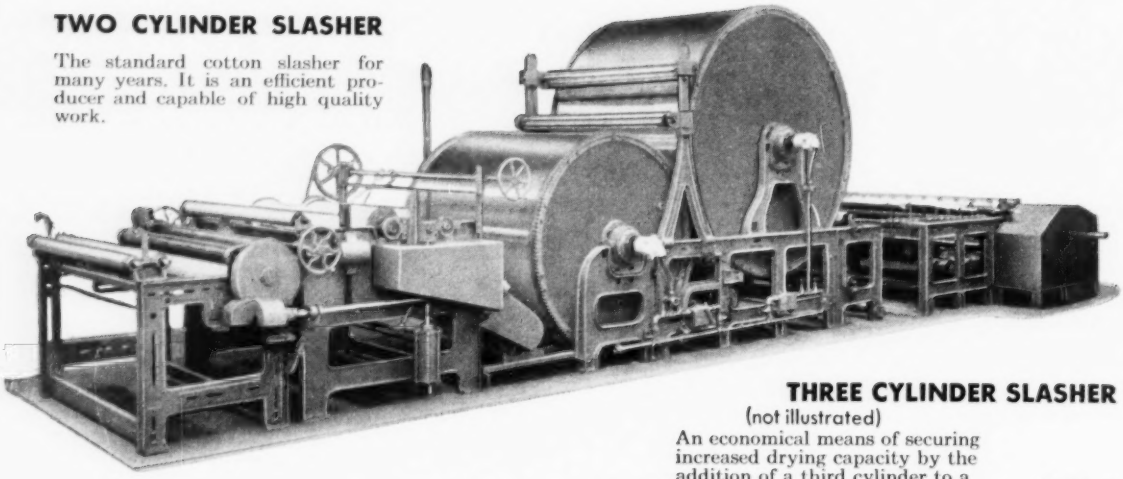
Walker Div. of Draper Corp. ..... *
Wallerstein Co., Inc. 172
Walton Laboratories, Inc. ..... *
Want Ads 234
Warner & Swasey Co. 174
Watson-Williams Mfg. Co. ..... *
West Point Fdy. & Mach. Co. 238
Westinghouse Electric Corp. 160, 161
White and Company 34
Whitehead Engr. Co. 233
Whitin Machine Works 39
Whitinsville Spinning Ring Co. 203
Wicaco Machine Corp. 210
Wildman Mfg. Co. ..... *
Wolf & Co., Jacques 33
Wonalancet Company 200

Y

Young Aniline Works ..... *

TWO CYLINDER SLASHER

The standard cotton slasher for many years. It is an efficient producer and capable of high quality work.



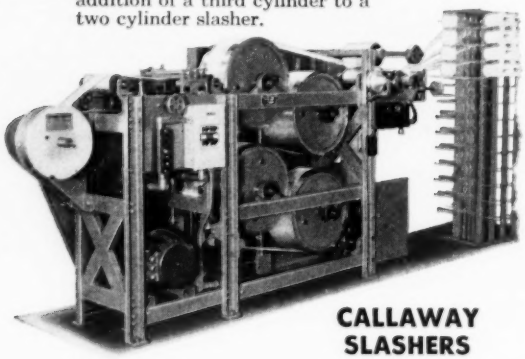
THREE CYLINDER SLASHER

(not illustrated)

An economical means of securing increased drying capacity by the addition of a third cylinder to a two cylinder slasher.

A Slasher To Fit Every Requirement

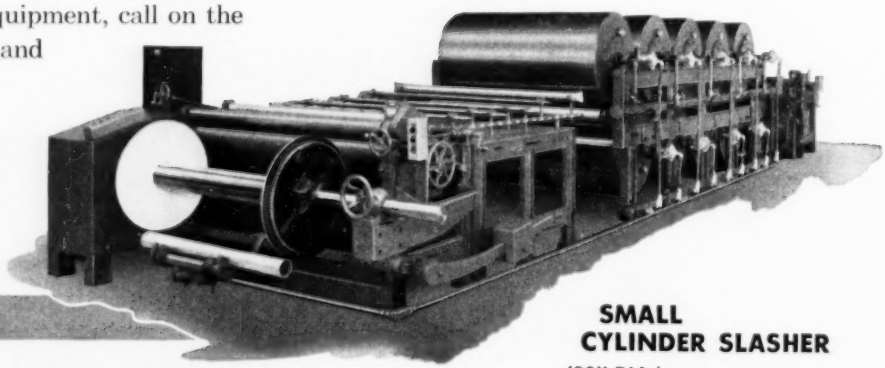
There's a WPF&M slasher for virtually every slasher room requirement . . . sample slashing or full production . . . the lightest gauze or the heaviest sheeting . . . natural fibers or synthetics. Whether you require a complete slasher installation, from size preparation to the finished warp, or modernization of your present equipment, call on the West Point Foundry and Machine Company—specialist in slasher room machinery.



CALLAWAY SLASHERS

Model 50 **Model 51** (illustrated)

Small, narrow-width machines capable of making full width warps for samples, testing, etc., using small amounts of yarn.



SMALL CYLINDER SLASHER

(30" DIA.)

A versatile machine suitable for cut staple and filament yarns. Can also be used for cotton.

WEST POINT FOUNDRY & MACHINE COMPANY

WEST POINT, GEORGIA

WRITE for SPECIFICATIONS

We will be glad to send you additional information on the 3 slasher units featured above and detail on the WPF&M Air-Dri, Cyl-Air, and Hi-Speed Slashers, without obligation.

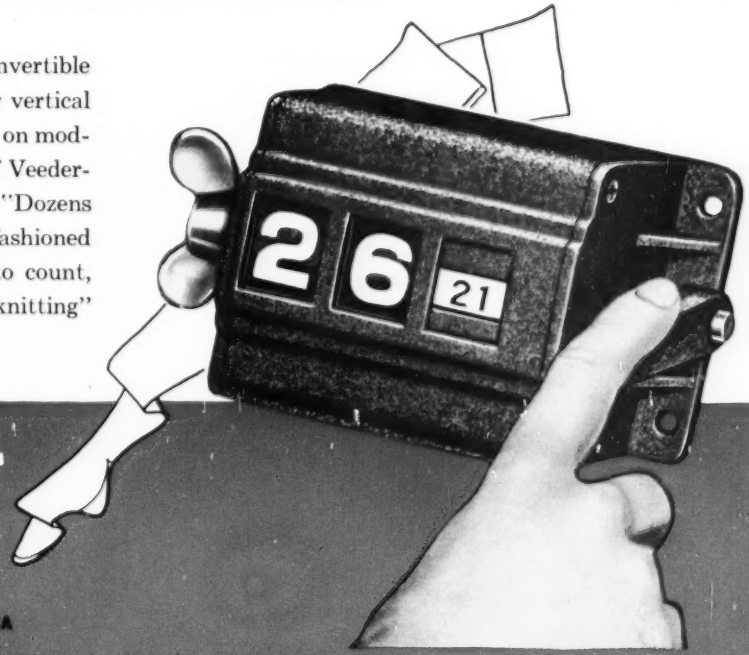
LET

VEEDER-ROOT COUNTERS

"tend to your KNITTING"

For any type of knitting machine . . . circular, flat, tricot, underwear or outerwear . . . Veeder-Root makes the counters you need to control your production and the uniformity of your cloth-roll lengths . . . to eliminate end-of-shift weighing or "guesstimating" . . . to reduce downtime and simplify payroll make-up.

Here at the right is a Veeder-Root 2-3-4 Convertible Reset Revolution Counter, supplied with either vertical or horizontal drive, which has a wide application on modern knitting machines. Below is one of scores of Veeder-Root Counters for other applications, this one a "Dozens Counter" for tallying by inspectors in full-fashioned hosiery mills. But no matter *what* you want to count, Veeder-Root has the counters to "tend to your knitting" . . . *to your greater profit.* Write:



VEEDER-ROOT
INCORPORATED

"The Name That Counts"

HARTFORD 2, CONN. • GREENVILLE, SO. CAROLINA
Montreal, Canada; Dundee, Scotland;
Offices & Agents in Principal Cities

smart printers
say
DISCOLITE...

DISCOLITE®...

CONCENTRATED SODIUM SULPHOXYLATE FORMALDEHYDE

...when they want the best high temperature reducing agent for vat colors and discharge pastes.

HIGH TEMPERATURE EFFICIENCY . . . practically *no loss* of strength at high temperatures.

ECONOMICAL . . . DISCOLITE is concentrated, yet dissolves readily.

VERSATILE . . . equally fine performance in white or colored discharge printing – or indigo printing.

GOOD FOR STRIPPING, TOO . . . sometimes effects stripping where other stripping agents fail to react.

GUARANTEED QUALITY . . . strict Royce laboratory control guarantees a safe, stable product that is uniform.

Drop us a line today. We'll send you data sheets and complete information—the whole DISCOLITE story.

Royce

CHEMICAL COMPANY • CARLTON HILL, NEW JERSEY

Manufacturers of Chemicals for the Textile Industry

8595